

THE
NATURAL HISTORY
OF
VEGETABLES,

As well Foreign as Indigenous;

Including an Account
Of their ROOTS, BARKS, WOODS, LEAVES,
FLOWERS, FRUITS, SEEDS, RESINS,
GUMS, and CONCRETED JUICES.

As also their
Properties, Virtues, and Uses in Medicine;

TOGETHER WITH
The Method of CULTIVATING those planted
in GARDENS.

By R. BROOKES, M. D.
Author of the *General Practice of Physic*.

VOL. VI.
The SECOND EDITION, Corrected.

To which is added
AN APPENDIX.
CONTAINING
Observations on HOT-BEDS, and WATERING of
PLANTS.

LONDON:
Printed for T. CARNAN and F. NEWBERY, jun.
at Number 65, St. Paul's Church-Yard.

MDCCCLXXII.

THE
NATURAL HISTORY
OF
VEGETABLES

As well foreign as indigenous
Including in America
Of the Royal Botanic Garden, London
As known from the
Garden and Herbarium of the
At the same
Properties, Virtues, and Uses in Medicine
TOGETHER WITH
The Method of CULTIVATING them
in GREENHOUSES

By R. BANKS
F.R.S.

The second Edition, corrected
TO WHICH IS
APPENDED
AN ATLAS
Containing
Coloured Figures of the
Plants

LONDON
Printed by T. Cadell and W. Davies
at the Strand, in the Temple
1753.

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PART I.

INTRODUCTION.	
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PART

INTRODUCTION.

IF we attentively survey the different tracks, thro' which the knowledge of BOTANY has of late been pursued, we shall soon find sufficient reason to conclude, that, however long and craggy the paths may be that lead to any other science, this stands most in need of being shortened and repaired. The science of Vegetables may, with propriety, be divided into three classes: the first consists of the order of their arrangement in the botanical nomenclature; the second, of their culture; and the third, of their properties. The two first, while they serve to amuse and delight us, enable us more readily to comprehend the last, which is the only one of real importance, and which claims our most serious attention.

However necessary the proper arrangement of the various species of Vegetables may appear, it is very certain, that the immense labours, which some late botanists have undergone, to give us a list of the names of plants, can contribute very little to the discovery of their properties. We should be led to suppose, from the repeated endeavours to systematise this science, that the whole of the student's pursuit was directed to acquire the names of plants. More time has been consumed in making catalogues of this nature, than, if properly applied, would have been sufficient to acquire a tolerable knowledge of the science, and perhaps have enabled the botanist to discover several new properties in the vegetable world, as yet unknown. Numberless efforts have been made to impress distinct ideas of each plant, without fully describing them; but every botanical system has hitherto failed in this particular, since nothing but a perfect description of each can give an adequate idea. For this reason, leaving such systems to the speculative, I have, in the following work, pursued the common method, and

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given a perfect account of every Vegetable in use, its roots, leaves, stalk, height, flower, and seeds. Such compleat distinctions are absolutely necessary to distinguish one object from another, throughout every department of Natural History, but particularly in this, where the objects are so numerous. The deviations of Nature are not to be reduced into systems: almost every plant, even of the same species, has its variations, this year differing, in some respects, from what it was the last.

I flatter myself, I shall readily be excused for not having adopted the systems of some great men, in contradiction to nature and experience, my design being, not to amuse the speculative, but to direct the industrious. Their attempts to reduce the names of plants into a system has rendered the study more difficult, and more subject to error, than it would have been, if the student had only used his sight for the distinguishing of plants, and his memory for registering them. The number also of Vegetables, which they have undertaken to register, is equally prejudicial to this useful study, not less than twenty thousand species having been classed, the mere remembering of which, if at all practicable, would employ no small portion of the narrow limits of human life. Instead therefore of expatiating on so large yet barren a field, I have taken care to describe only such exotics, and indigenous plants, as are useful to us, either in medicine or manufactures. Those plants, which have been long laid aside, and very seldom cultivated among us, I have designedly omitted, as inconsistent with this concise system of Botany, in which, I flatter myself, the reader will find sufficient amusement and instruction. Where I have departed from this plan, it has been with a view to preserve the description of a plant, which, though now perhaps entirely neglected, may one day, when its virtues shall be perfectly known, be thought worthy of attention.

Let us then, without paying any regard to systematical arrangement, treat this subject in the manner of the ancients, such as *Pliny* and *Aristotle*. Those, that have been already useful to mankind, we shall

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take particular care minutely to describe, and leave posterity and chance to find out the uses of others now unnoticed. But, before we proceed in this undertaking, it may not be improper to take a survey of Vegetables in general.

In every vegetable production, we may consider either the seed, the root, the leaf, the bark, the stalk, the pith, and the flower: all which are necessary in carrying on the business of vegetation, and transmitting the species, from season to season, without interruption. Though the principles of vegetation reside in every part of the plant, yet we generally find greater proportions of oil in the more elaborate and exalted parts of Vegetables, that is, in the seed. As this contains the rudiments of the future Vegetables, it was necessary that it should be well stored with principles, that would preserve the seed from putrefaction, and tend to promote vegetation. When the seed is sown, in a few days, it imbibes so much moisture as to swell, and thus it produces the radicle, or incipient root, with some force, which, when shot into the ground, imbibes nourishment from thence, and what it receives becomes, in a short time, the chief supply of future growth. When the root is thus far grown, it supplies the plume with nourishment, till this, by expanding and growing thinner, turns to green leaves, which are of such importance to the incipient plant, that it perishes, and will not thrive, if they are pulled off; but when the plant is so far come to maturity, as to have branches and expanded leaves to draw up nourishment, the seminal leaves, being no longer useful, soon perish, their perspiration being immediately impeded by the newly-produced leaves that overshadow them, and their sap being drawn away by the larger channels of the upper foliage.

As the plant advances in stature, the first, second, third, and fourth order of lateral branches shoot out, each lower order being larger than those immediately above them, not only on account of their having a longer time to grow, but because, being inserted in larger parts of the trunk, and nearer the root, which is the grand supply, they are provided with greater

plenty of sap: hence we frequently see trees beautifully tapering to the top.

As soon as the circulation of the blood in animals was discovered, botanists began to think, from the analogy there was between all the works of Nature, that the same circulation must also prevail in Vegetables; and some have actually undertaken to prove, that the sap first rises to the tops of trees by means of the pith, and then descends to the root by the bark, with the swiftest motion. That great naturalist, Dr. *Hales*, undertook, by experiments, to confute this opinion; but, without entering into a detail of that gentleman's opinion, or that of Mr. *Du Hamel*, thus far we may venture to conclude, as a certain fact, that there is a constant flow of juices through every plant, the root furnishing it with great quantities, while the leaves, spreading an extended surface to the sun, have their moisture attracted in very large quantities; and, when the influence of his beams no longer continue, they at night act as sponges, and imbibe the humidity of the air. Thus we see, that the leaves are absolutely necessary in the works of vegetation: they, like young animals, are furnished with instruments to suck it from thence, and, besides this, they separate and carry off the redundant watery fluid, which, by being long detained, would turn rancid, and become fatal to the Plant.

As the leaves are found to exhale moisture, so they are known to imbibe nourishment from the air. The acid and sulphureous spirit, with which the air abounds, is thence extracted by the leaves of plants: so that it is probable, the most exalted and aromatic principles of Vegetables are derived from this source, rather than from the grosser watery fluid of the sap. Leaves are found to perform, in some measure, the same office for the support of vegetable life, that the lungs of animals do for the support of vegetable life; but, as plants have not the power of contracting or dilating the chest, their inspirations will depend wholly on the alternate changes of the air. The vine is known, from repeated experiments, to draw but little watery nutriment from the earth by its roots, and therefore it imbibes

imbibes greater quantities of dew, impregnated with air by night, from whence it derives its richness of flavour. It is probable, that this may be the reason, why plants in hot countries abound more with fine aromatic principles, than northern Vegetables: the former chiefly extract their juices from the air by the leaf, the latter theirs from the earth by the root.

Nothing can exceed the regularity, with which leaves are placed on every plant; but the care, which Nature seems to take of the young shoots when budding, still deserves greater admiration; for the most tender shoots are ever nourished by those, which have acquired a greater degree of strength. Besides this, the leaf, as every one knows, has two different surfaces: the upper, which seems more smooth and polished; the lower, in which the ribs are more prominent, and of the colour of a paler green. The cause of this difference has not a little puzzled the botanists of every age: perhaps, the upper polished surface, from its position, being more exposed to the external injuries of the air and rain, is thus formed rather to defend the lower part, in which, probably, the attractive powers may reside. In this manner, the leaves of trees contribute to improve the flavour of the fruits, and regulate the vegetation.

The assiduity of Nature, in the production of growing plants, is not greater, than her care to preserve the seeds, which are to propagate the future Vegetables. The curious expansion of blossoms and flowers seem to be appointed by Nature, not only to protect, but also to convey nourishment to the embryo seed, and the fruits in general serve to supply the seeds with moisture.

When trees stand thick together in woods or groves, the lower branches, being shaded by those of the neighbouring trees, can perspire little, and imbibe less, on which account they perish; but the top branches, being exposed to a free air, perspire plentifully, and by this means drawing the sap to the top, advance in height rather than extent. Dr. Hales compares a tree to a complicated engine, which has as many different powers of attraction, as it has arms or branches, each drawing from their common fountain of life, the root.

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The younger the plant, the greater is its power of attraction; but, as it grows older, the vessels of circulation become more rigid, it ceases to push out its tender branches, and the whole plant, from the rigidity of age, acquires its greatest degree of hardness, when it ceases to vegetate.

Though fruits in general are the most inconsiderate agents in promoting the work of vegetation, being, as is commonly supposed, only destined to supply the seed with proper moisture and nourishment; yet, with respect to man, they make the most useful and pleasing part of vegetable productions. Their general properties, as constituting a part of our food, may be considered as arising from their different degrees of maturity. In general, while unripe, they may be considered as astringent, and in some measure partaking of the qualities of the bark of their respective trees: when come to a sufficient degree of maturity, they cool and attenuate; but, from too great a power in these respects, they often bring on disorders that are fatal in warm climates, where their juices are possessed of those qualities much more than with us. In our climates, however, this seldom happens, and they probably do not make a sufficient part of our diet.

As to the increase of plants, some proceed from seeds only, others from seeds and suckers; as tulips, for instance, which have seeds in their pistils, and a large quantity of small suckers, which rise, in a numerous progeny, round the parent plant. Some are propagated and brought to perfection by grafts, which are no more than small branches of the finest sort artfully inserted in an aperture, made in the wood or bark of some wild or ordinary plant; while others are multiplied by slips. The strawberry plant throws out two long fibres on each side, the knots whereof take root in the earth, and become so many new stems. The branch of a vine bowed down, and thrust into the earth, shoots out fibres through the knots that lie buried and concealed; cut the branch off where it joins with the stock, and the other end, which rises out of the ground, becomes a new vine. In short, there are plants, which
proceed

proceed from little slips or twigs of trees, when set in the ground, without any other manual operation.

There is no difficulty in accounting for the two first; because a seed, or a seed and a sucker, contain in them a shoot, or a minute plant complete. The graft, likewise, containing its buds for leaves, as well as fruits, the sap, when it flows into it, not only gives, but discovers what the graft contains. Let us now proceed to what at first sight seems more difficult to be accounted for, the encrease from slips of trees. When we set a slip into the ground, the sap, which overflows it, puts some of those shoots in motion; which are to produce new branches. The little suckers, which expand themselves on each side, are, by the pressure of the earth upon them, prevented from rising with ease into the air. The juice, which ascends into the stem, coming afterwards to flow back, and descend upon the same suckers in the earth, take their course downwards instead of upwards, and become roots instead of branches. From whence we may conclude, that the stem gives only a passage to the sap and the air, and that the sap and air give nutriment and motion to all the shoots; that these shoots are produced before-hand, and are perhaps wrapped up in one another, as they were from the beginning of the world, for the benefit and advantage of mankind through the succession of all ages.

We must not quit our considerations on Vegetables, without paying particular respect to flowers, which are formed to please us, and for our delight have received their amiable appearances: no eye but ours can enjoy their beauties: common animals never seem to be affected with pleasure when they behold them, nor do they ever stop to contemplate their wonders. They confound them with the common herbage of the field, they trample on the most beautiful of the tribe, and are perfectly insensible of this ornament of the earth. Whereas man, amidst a crowd of objects and riches that surround him, distinguishes and pursues the flowers with a peculiar complaisance.

Flowers have likewise an agreeable correspondence with our eyes, and a set of powerful attractions that invite us to approach them. Whenever we gather

them, they present us with new perfections, in proportion to our regarding them with nearer attention. The greatest part of them not only regale our view with the beauty and arrangement of their colours, but gently delight our smell with an exquisite perfume; and, when they have gratified our senses with an innocent satisfaction, the mind still discloses wonders in them, which ravish its faculties.

When we carefully survey the structure of a flower, in order to discover its relation with the seed, we always find one or more inclosures appointed for the reception of the semen. Around that inclosure is a set of chives sustaining several packets of powder, which they scatter on all parts. The whole is encompassed with an empalement, or soft robe, that unfolds and closes, with a kind of precaution, according to the disposition of the air. All these things convince us, that these parts, which are disposed with so much art and regularity, and wither round the inclosure, when the seed is formed, are instrumental in the generation of that seed.

It is difficult to conceive, how far the design, to delight man with the beauty and profusion of flowers, has been extended. Their multitude is a real prodigy, and we are led to imagine, that they had been commanded to spring beneath every step we take. They rear their heads on the lofty tops of trees, and are diffused through the herbage that creeps along the earth; they embellish the valleys and the mountains, and the meadows are enamelled with their colours; they are gathered from the skirts of woods, make their appearance even in deserts, and the earth is a garden entirely covered with their bloom. The prospect they afford us is so pleasing, that the generality of those arts, which are ambitious to please, seem most successful when they borrow the assistance of flowers: sculpture imitates them in its softest ornaments, architecture courts the embellishments of leaves and festoons on those columns and fronts, which would otherwise be too naked: the richest embroideries are little more than foliage and flowers; the most magnificent silks are almost covered with these charming forms, and are thought

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thought beautiful in proportion as they resemble the lively tinge of natural flowers.

Flowers are not only intended to beautify the earth with their shining colours, but the greatest part of them, in order to render the entertainment more exquisite, diffuse a fragrance that perfumes all the air around us; and it should seem as if they were solicitous to reserve their odours for the morn and evening, when walking is most agreeable; but their sweets are very faint during the heat of the day, when we visit them the least. Let us endeavour to account for this.

The sap is perpetually transpiring through the flowers, in proportion to the sun's warmth. These fine spirits, which are the essence and aromatic parts of the flowers, are easily dispersed through an air rarified by heat, and affect the smell but faintly at that time; but their dissipation is much abated, when the air is condensed by the return of night. The action of the sun, by which they are diffused, is too weak, in the morning and evening, to scatter them to any considerable distance, and it is then that the reunion of these spirits affect us with the strongest impressions. The evaporation of these minute particles forms an atmosphere around the flower, which is dissipated or condensed, as the action of the sun is more or less intense.

This is a demonstration, that the spirit of flowers are dispersed in proportion to the sun's action upon them; but we will not confine ourselves to this particular: in the study of natural things, true philosophy is never limited to the contemplation of their mechanism, but extends its curiosity to the benefits they produce. We are easily sensible of the intercourse that appears between the flowers, the air, and the sun beams; and can we possibly be unacquainted with that goodness, which is so attentive to make this correspondence advantageous to man? Providence has not only enamelled his way with flowers, for the entertainment of his view, but has taken care to embalm and purify the air he breathes, by shedding the noblest perfumes in his passage.

Their services, however, are not limited to the sight and smell, for other senses may derive advantages from them. They supply us with pastes to enrich our de-

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ferts, and present us with powders to perfume our wardrobes; they afford us delicate syrups, and even remedies to relieve us when we are indisposed; violets, jonquils, and peach-blossoms, roses, jessamines, carnations, and especially orange flowers, accommodate us with conserves, and a variety of confections, together with essences and distilled waters, that continue to us the enjoyment of the odours, and other useful qualities of flowers, when they have long ceased to be in season.

Upon the whole, we may undoubtedly draw this conclusion, that every Vegetable and flower, however lightly and insignificantly custom and taste may have taught us to behold it, affords us an ample field of admiration, and cannot fail to inspire us with the highest esteem and veneration for the great Author of Nature, who has created and formed so many things for our use and amusement.

NATURAL HISTORY

OF VEGETABLES.

PART I.

Of Foreign Vegetables, and their Roots, Barks, Woods, Leaves, Flowers, Fruits, Seeds, Resins, Gums, and concreted Juices.

CHAP. I.

Of Roots.

THE CALAMUS AROMATICUS, or *Acorus Vernus*, is a sweet smelling flag. It has a long, oblique, knotty root, about as thick as a man's finger, and a little compressed; when fresh, it is of a whitish green colour; but afterwards, turns of a reddish yellow. It is white and spongy within, has a sharp bitterish aromatic taste, with a distant relish of that of garlick, and a fragrant aromatic smell.

From the root, that lies near the surface of the earth, there arise leaves, some of which are a cubit in length, others half as much, and its peculiar characteristic is a simple elegant iulus, with leaves like the aromatic flower de luce. They are sharp at the point, of a pleasant green, smooth, and above a quarter of an inch broad. They have six petals, which are blunt, hollow, loose, thick above, and truncated below. There are six thickish filaments, a little longer than the co-

rolla. The antheræ are thickish, and join to the *de-
dymæ*. The germen is gibbous, longish, and there
is no style; but the stigma is a prominent point. The
capsula is short, triangular, and consists of three cells.
The seeds are of an oblong oval*.

The INDIAN ACORUS, by some called the true
Asian Calamus Aromaticus, has a root not unlike the
former, but more tender and of a pleasanter smell; the
taste is bitterish, but not disagreeable. It is found both
in the *East* and *West-Indies*, and is in shape much like
the former. It is recommended for inciding cold gross
humours, and some pretend it is good against poisons.

ANGELICA is placed by *Ray* among the umbellife-
rous herbs with a shorter seed. The flower, according
to *Linnaeus*, is a large convex umbella, and the univer-
sal corolla is uniform; but the proper consist of five
oval concave petals, that are nearly equal to each
other. There are five simple filaments, and roundish
antheræ. The germen is beneath the receptacle; there
are two simple erect styles of the length of the corolla,
and the stigmata are capitated. The fruit is oval, ob-
long, streaked, and may be separated into two parts.
There are two oval, oblong seeds, convex and streaked
on the one side, and the other plain. The root is
three digits thick, with many fibres, black and wrink-
led on the outside, but within, white, soft, juicy,
sharpish and bitterish. The stalk grows to two cubits
and upwards in height, and is hollow, full of branches,
with large leaves like those of meadow smallage, but
much sharper. The dried root is brought to us from
Bohemia, the *Alps*, and the *Pyrenees*. The best is
thick, of a dusky colour without, whitish within, and
with a most fragrant smell, a little inclining to musk,
and of an acrid aromatic taste. The roots brought
from *Spain* are now very seldom prescribed upon any
occasion. Our own candid Angelica roots are well-
known to every one as a sweetmeat.

ANTHORA,

* The description of this flower is from *Linnaeus*, whose
terms cannot be properly translated into English, but the
learned reader will readily understand them.

ANTHORA, in English, *Monk's hood*, or *colicifera* *Wolf's Bane*, is the *Aconitum* of Tournefort. The flower has five unequal petals set opposite to each other in pairs, the uppermost of which is galeated with its back turned upward, the point sharp, and reflected towards the base. The two on the sides are broad, roundish and connivent; but the lowermost two are oblong, and turned downwards. The colour is of a palish yellow, and the pistil turns to a fruit, in which are collected, as into a head, corniculated membranaceous sheaths, full of angular wrinkled blackish seeds. The plant is generally about nine inches high, and sometimes it is above a cubit, with a singular stiff angular hairy stalk, on which the leaves are set alternately, are whitish below, and have a bitterish taste. The virtues of this plant are uncertain, and some think the use of it is dangerous.

ARISTOLOCHIA is of several kinds, as the round, the long, the clematitis, and the slender. *Aristolochia Rotunda*, or *Round Birthwort*, according to *Linnaeus*, has a single unequal petal, with a ventricose base, and consists of an oblong tube of a hexagon cylindrick shape and a broad edge, extended downwards like a long tongue. There are six anthers joined to the lower part of the stigmata, and the germen is oblong, angular, and under the receptacle. There is scarce any style, and the stigma is roundish, concave, and divided into six parts. The capsula is large, hexangular, and consisting of six cells. There are many flat seeds, and the fruit is round. It consists of a great number of stalks proceeding from a single root, which are a cubit high, and the leaves are placed alternately on the stalks almost without any pedicle. They are roundish, of a dusky green colour, and as it were embrace the stalks. The flowers proceed from the wings, the root is tuberosa, solid, three inches thick, roundish, wrinkled, with a few fibres dusky on the outside, of a palish yellow within, and covered with a thick bark: the taste is acrid, aromatic, and bitterish.

ARISTOLOCHIA LONGA, *long Birthwort*, has the same sort of flower as the former, only it is of a whitish

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whitish green colour within, and outwardly of an herbaceous colour. The fruit is terminated like a top, and when it is ripe it gapes, showing a broad reddish seed, which at length turns to a dusky colour. The root is oblong and about an inch thick, though sometimes it grows to the thickness of a man's arm; it is wrinkled, and of a dusky colour without, but within it is yellowish, and the taste is somewhat more faint than the former.

ARISTOLOCHIA CLEMATITIS has a long creeping root, divided into several fibres; it is seldom thicker than a goose quill, is dusky without, and yellowish within; and has a bitter taste, with a smell stronger than the former. The stalks are a cubit in length, and are rounder, harder, and stronger than those of the former; likewise the leaves are larger, full of veins, and of a pale green colour, with longer pedicels than the rest. The flowers are pale, shaped like those of *round Birthwort*, but less, and the fruit is like that of *long Birthwort*, but bigger, they being of the size of small apples; likewise the seeds are larger.

ARISTOLOCHIA TENUIS, *slender Birthwort*, otherwise called *Pipilachia*, has a root which consists of long slender filaments, meeting in one head of a yellowish colour, with an aromatic smell, and an acrid bitter taste. The stalks are about nine inches high, and slender. They are angular and streaked, and full of branches, with the leaves more pointed than the *round Birthwort*, but less wrinkled, and a little sinuous on the edges. The flowers are like those of the *round Birthwort*, but less, and sometimes black; but at others they are of an herbaceous yellowish colour, with fruit like those of the round. When they are ripe, they gape at the part next the pedicle, and the seeds are like those of the *round Birthwort*.

All the kinds are reckoned to be opening and a little cleansing, and some esteem the round sort as best. They are said to be good against catarrhs and disorders of the breast from gross humours; as also against wind, pains of the cholic, and obstructions of the viscera.

BEHEM





China Root.

BEHEN ALBUM, *white Behen*, is a root which is brought to us in pieces about as thick as a man's finger; of an ash colour without, with a contracted wrinkled surface, but pale and pulpy within, and of an acrid taste.

BEHEN RUBRUM, *red Behen*, is a root brought to us in pieces like jalap, and is dry, thick, and of a blackish red colour, with a taste and smell like the former, but more faintish. They are both brought from *Syria* and other places. It has a long geniculated root without hairy fibres, and is creeping like *Liquorice*, which it resembles both in shape and thickness; but it is whiter on the inside.

BUTUA, or *Parira brava*, is a *Brazilian* plant, and the root is woody, hard, contorted, dusky, and wrinkled without, as well lengthways as circularly; within it is of a dusky yellow, and seems to be interwoven with various fibres; so that when it is cut transversely, they appear like so many concentric circles, with several rays or fibres reaching from the center to the circumference. It is without smell, but of a bitterish taste, with a sweetness not unlike liquorice. It is as thick as a man's finger, and sometimes as a child's arm.

It is good in ulcers of the bladder and kidneys, and, when mixed with a little balsam of capivi, it will certainly cure them. Some say it is an excellent remedy in a moist asthma, and the yellow jaundice. The dose is from twelve grains to thirty in substance; and from two drams to three in decoction.

CARLINA, or *Chamaelon albus* of the shops, is a root a palm or two in length, and of the thickness of a man's thumb; it is red without, and has a surface which seems to have been corroded; it is white within, with an acrid aromatic taste, and a fragrant smell. It is brought from the *Alps* and *Pyrenees*, and should be chosen fresh, dry, and not carious.

CASUMUNAR is an *East-Indian* root, and is tuberose. It is thicker than a man's thumb, and is cut into transverse pieces; it is marked on the surface with circles like galangal, and is a little geniculated. It is ash coloured without, yellowish within, with a subacrid

acid, bitterish, aromatic taste. What plant this belongs to is uncertain; however, it is said to strengthen the nerves, refresh the spirits, corroborate the stomach, and repel wind. It is given in substance from ten grains to thirty, and the tincture from twenty drops to thirty. The extract is also given from six grains to fifteen; but the chief use made of it is to help digestion and dispel wind.

CHINA is a long root, and is so called from the place it is brought from. However, there are now two sorts, one of which is brought from the *East*, and the other from the *West-Indies*. It is a thick arundinaceous, geniculated, heavy, woody root, beset with unequal tubercles, and the colour without is of a dusky red, but within of a reddish white. The taste while fresh is a little acrid, but when dry it has a small degree of an earthy astringent taste, and without smell; if it is good, it seems to be fat and unctuous when chewed. The plant to which it belongs is called the rough *Chinese* smilax, or bind weed. The medicinal use of this root is now but little regarded. The *American China* differs from the former, only it being of a darker colour without, and redder within.

CONTRAYERVA is a root an inch or two in length, and about half an inch thick, and is knotty on the outside; it is hard, thick, reddish or blackish without, wrinkled, and the protuberances are, as it were, covered with scales; it has also many slender filaments, or threads, but within it is pale, and has a somewhat astringent bitterish taste, with a sweet sort of acrimony when it has been held long in the mouth. The tuberosc part is only to be chosen; for the filaments are of no value. It grows in several parts of the *West-Indies*, and is brought to us from *Spain*. It is a mild alexipharmic, and has been counted excellent against all sorts of coagulating poisons. It strengthens the stomach, helps digestion, and discusses wind; it is also used by some in malignant fevers. The dose is generally a scruple; but it may be given to a dram and upwards. It is certainly very good to promote a diaphoresis.

COSTUS





COSTUS is by authors said to be of various kinds; but that in use with us is the sweet Costus of the shops, and is brought from the *East-Indies*. It is cut into oblong pieces, which are about the thickness of a man's thumb; which are light and porous, but hard and brittle, and a little resinous. Sometimes it is whitish, and sometimes of a yellowish ash colour, with an acrid aromatic bitterish taste; but the smell is fragrant, and not unlike that of violets. It is said to attenuate viscid humours, to promote expectoration, and is by some reckoned a cephalic, as well as to be good for promoting a diaphoresis and urine; but it is very seldom used.

CURCUMA, *Tumeric*, is a root brought from the *East-Indies*, and is oblong, slender, tuberosc, knotty, and of a yellow or saffron colour; the taste is subacid and bitterish, with a smell like that of ginger, but weaker. It is a very useful root to the dyers; and, as it is very much in request, there is scarce a garden in the *East-Indies* where it is not cultivated: they use it with their victuals as a sort of spice. It is recommended against obstructions of the lungs, liver, spleen, mesentery, and womb; but its principal virtue is against the jaundice, in which it is looked upon as a specific. It is given in substance from a scruple to a dram, and in infusion to two drams.

CYPERUS LONGA, *long Cyperus*, is a long slender knotty contorted root, not easily broken; it is blackish without, and whitish within; and of a sweet subacid aromatic taste, with a fragrant smell like that of nard. It is generally brought to us from *Italy*, and care should be taken that it has a lively smell, and is not carious. There is another root called *round Cyperus*, which has been brought from the *Levant*, and is a roundish and turbinated root, of the size and shape of an olive. It is rough, streaked, reddish without, and sometimes black; but it is white within, and there are several fibres depending from a single head. The smell and taste are the same as the former. Many virtues have been attributed to it; but in the present practice it is seldom used.

DICTAMNUS CRETICUS, *Dictamnus of Crete*, is a kind of *Origanum*, and is now only used in Venice treacle: it is brought to us from *Candy*, and is said to grow on mount

mount *Ida*. There is another sort called *white Dittany*, which is a sort of *Fraxinella*, now of some use in many parts of *Europe*. The root, or rather bark of the root, is thickish, white, and is generally brought to us wrapped up in the same manner as cinnamon; it is of a bitterish taste with a little acridity, and has a fragrant, and pretty strong smell when fresh. It is said to be an alexipharmic, to promote sweat and urine, to kill worms, and to resist putrefaction. The dose is from half a dram to two drams in substance, and in infusion to an ounce.

DORONICUM ROMANUM, *Roman Wolfsbane*, is a tuberose root full of knots and tubercles, which are hardly so big as small hazel nuts; it is yellowish without, and whitish within, and the taste is sweetish, clammy, and a little styptic. It is brought to us from the *Alps*. As the qualities of this root are not perfectly known, it is not advisable to admit it into practice.

GALANGA MINOR, *the lesser Galangal*, is a tuberose, knotty, geniculated root, and is divided into branches, as well as encompassed with circular rings; is uneven, hard, solid, and about as thick as the little finger; of a dusky colour without, and reddish within; with an acrid, aromatic, bitter, pungent taste, burning the mouth like pepper or ginger, and has an aromatic or fragrant smell while it is fresh: it is used in the *East-Indies* as a spice. It is a warm stomachic bitter, and is given to promote digestion. It is good to disperse wind, and in all disorders that proceed from a weak stomach. The dose is from fifteen grains to thirty in substance, and from half a dram to two drams in infusion.

GENTIANA, *Gentian*, is a root sometimes a foot in length, and near an inch in diameter, but sometimes more; it is dusky on the outside, but of a yellowish red within, and a taste intensely bitter; likewise the substance is a little spongy. It grows among the *Alps*, *Pyrenæes*, and other mountains, and is brought to us from *Germany*. Not many years ago there was a poisonous root sold instead of Gentian; but it may be readily distinguished from it, it being of a whitish colour within, and without its bitter taste. Gentian is

usually prescribed as a bitter to strengthen the stomach, and to help digestion. The dose is from half a dram to two drams.

GLYCYRRHIZA, *Liquorice*, is a root extremely well known almost to every body. The stalks rise to three or four cubits in height, and are divided into several branches, with roundish leaves of a faint green colour. They stand upon the stalks by pairs, that is, one on each side, but at the end there is one that is single. The flowers are papilionaceous, small, blueish, and at the top disposed as it were into a spike. The pistil that rises from the calyx turns into a reddish pod, half an inch long, which has two valves and a single cell containing the seeds, which are small, hard, flat, and in the shape of kidneys.

Liquorice grows spontaneously in *Spain*, *Italy*, *France*, and *Germany*; and is also common with us in *England*. The root temperates salt acrid humours, and is good in diseases of the breast. It is often prescribed in decoctions, as well to appease the heats of the fluids as to abate their acrimony. As for the dose, it is not easily determined; for it is usually chewed by children in large quantities, without any bad consequence. The inspissated juice, which is brought from *Spain*, is of a blackish colour, and is commonly called *Spanish Liquorice*: it has the same virtue as the root, but stronger.

HELLEBORUS ALBUS, *white Hellebore*, is an oblong tuberose root, sometimes as thick as the thumb, dusky without, and white within, with a great number of whitish fibres; the taste is acrid, a little bitterish, subastrigent, disagreeable and nauseous. The inward use is not very safe; nor indeed the outward; for when the powder is applied to an issue it will occasion violent purging. When taken inwardly, it is a strong emetic, and has been observed sometimes to occasion convulsions and other terrible disorders. However, in desperate cases, it may be sometimes ventured upon, particularly against madness; and the dose in this disease is a scruple: it ought always to be used with the utmost caution.

HELLEBORUS NIGER, *black Hellebore*, is a tuberose knotty root, from which as a head many fibres hang,

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hang, which are thick and black without, but white within, and of an acrid bitterish taste; the smell while fresh is exceeding strong. The inward use of this is much safer than the former, and is accounted a proper purge against melancholic and atrabilarious disorders. It acts particularly on the strait gut, for which reason it promotes the piles.

HERMODACTILUS, *Hermodytyl*, is a hard tuberos triangular root, or rather in the shape of half a heart, it being flat on one side, and tuberos on the other, terminating as it were in a point; it is reddish without, white within, and is easily reduced into a meal by pounding; it is of a clammy sweetish taste, with a slight acrimony. *Hermodytyls* are always dried when they are brought to us, and have been thought to purge gross humours, particularly of the joints, whence they have been esteemed as excellent in the gout; however, their purgative quality is but weak. It is given in substance from half a dram to two, and in decoction to an ounce; but it is seldom or never used alone.

JALAPA, *Jalap*, is an oblong turbinated thick dense root, cut into transverse pieces, and is heavy and blackish without, but within dusky or ash coloured. It is resinous, hard to be broken, and has a taste that is something acrid and nauseous. It is the root of an *American* convolvulus, and is called by some *Mexican* night shade with a large flower. It is in great use as a purge, and is of the stronger sort, though it seldom or never produces any bad consequences. It is best given in substance, because then it operates best; for the resin is apt to occasion gripes, and the watery extract is too weak. It is very useful in a cold phlegmatic habit of body; but is not at all proper in feverish disorders, nor in hot and dry constitutions, nor yet in melancholic, or scorbutic disorders. A scruple is the usual dose to grown persons.

IMPERATORIA, *Master-wort*, is not the same plant called by that name with us, for it is brought from the *Alps* and *Pyrenean* mountains; and is an oblong root as thick as a man's thumb, and wrinkled; it is somewhat geniculated, is dusky without, and white within, with a very acrid aromatic taste, vio-
lently





Florentine Orris.

Prout sc.

lently vellicating the tongue, and heating the mouth; it has a most fragrant smell, but inclinable to what is commonly called physicky. It has been reckoned an alexipharmic, and has been recommended by *Casper Hoffman* as a divine remedy in the cholera and windy disorders; but it is not now much in use with us.

IPECACUANHA is brought from *America*, and is of two kinds, the *Peruvian* and the *Brazilian*. The *Peruvian* is not a quarter of an inch thick, is crooked, and as it were rough with circular rings; it is of a light brown or ash colour, and is dense, hard, brittle, resinous, with a small nerve which runs thro' its heart the whole length of the root; the taste is sub-acrid, bitterish; and with little smell. The *Brazilian Ipecacuanha* is of a brownish colour, and is crooked and rough, with rings like the former, but more rugged, and is little more than the twelfth of an inch in thickness; it is brown or blackish without, but white within, and of a slightly bitterish taste. The *white Ipecacuanha* is a bastard sort, and is slender, woody, without wrinkles or bitterness. It is sometimes imported by the merchants for the true *Ipecacuanha*, but may be readily distinguished from it; for, besides the marks already mentioned, it is of a whitish yellow colour, neither will it work upwards or downwards like the two former. These last are now of great use in the beginning of dysenteries and other fluxes of the belly; but the *Peruvian* is accounted the best. Eight ounces of the root will yield ten drams of resin, when the extract is made with spirit of wine. It has formerly been given to the quantity of a dram; but now from six to ten grains are judged to be sufficient. In a confirmed dysentery, if the doses are so small as not to be strong enough to purge, and given several times a day, it will cure the ulcers of the intestines. It is now more generally used as an emetic than for any other purpose.

IRIS FLORENTINA, *Florentine orris*, is a root which is brought to us in oblong pieces, and it is geniculated, a little flat, white, with a yellow reddish bark, which being taken off, the root has a bitter acrid taste, with a fragrant violet smell. It is sometimes

twice

twice as thick as a man's thumb. The *Iris nostras purpurea*, the common purple flower de luce, is of the same kind as the former; for the roots, leaves, and flowers, are of the same shape, though the colour is different. *Florentine orris* attenuates and incises the thick lymph lodged in the breast, and promotes its expectoration; whence it is good in the asthma, shortness of breath, and coughs; but it is chiefly used as a perfume, and is often mixed with snuffs. The dose is from a scruple to a dram. When the juice is snuffed up the nose, it brings away a great quantity of serum; and, mixed with bean meal, it is said to take away freckles.

MECHOACANNA, *Meeboacan*, is a root brought from *South America* in white pieces, and is covered with a wrinkled bark. The substance is softish with scarce any fibres, and the taste is sweetish, with a little acidity, which sometimes causes a nausea. It has rings somewhat like briony; but differs from it in being compact, and in having no bitter taste, nor a strong disagreeable smell. It was looked upon at first as a most excellent purge, but is not so much cried up now since jalap became in use.

MEUM ATHAMANTICUM, *Spignel*, is an oblong root about as thick as the little finger and branched; it is covered with a bark of a ferruginous colour; but it is pale within, a little gummous, and contains a whitish pith. It smells almost like parsnips, though more aromatic, and the taste is not disagreeable, though it is acrid and a little bitter. It grows among the *Alps* and the *Pyrenean* mountains. It is said to attenuate thick gross humours, and is recommended in the humoral asthma; but it is now but seldom used.

NARDUS-CELTICA, *Celtick-Nard*, is a fibrous, capillary, reddish root, covered with small scales, of a yellowish green colour; with an acrid bitterish aromatic taste, and a fragrant strongish smell. It is said to be a carminative, to strengthen a weak stomach, and to help digestion; but it is now chiefly used in venice treacle and mithridate. The dose is from half a dram to two drams.

NARDUS

NARDUS INDICA, *Indian Spikenard*, is a hairy root, or rather a congeries of slender capilliments adhearing to a head, which is about as thick as the finger, and as long, and of the colour of rusty iron; the taste is bitter, acrid, aromatic; and the smell agreeable. It is said to strengthen the stomach, and to disperse wind; but its principal use now is in venice treacle and mithridate.

NINZIN, and **GINS-ING**, are generally taken for the same roots, but they are distinct from each other; however, their outer appearance and virtues are much the same, though Gins-ing bears the much greater price. The root of Ninzin is in the shape of a parsnip, is three inches in length, and about as thick as the little finger, with a few fibres proceeding from it. It is pulpy, whitish, and has some faintish cracks on the outside; but below it is divided into two branches. It has the smell of the yellow parsnip, and the taste of skirrets; but it is not quite so sweet, and there seems to be a little bitterish taste. It grows in *Korea*, from whence it is brought to *Japan*, and is in high esteem in those parts; for they pretend it is endowed with extraordinary virtues. However, it is of no use with us. Gins-ing is a root of an inch long, and about as thick as the little finger; it is slightly wrinkled, and generally divided into two branches, but sometimes into more, and at the small ends there are slender fibres. It is a little reddish without, but yellowish within, and the taste is subacrid, a little bitterish and aromatic, with an aromatic smell. On the top there are a row of knots placed in an irregular order, which seem to tell the years of its growth. It was thought only to grow in *China* and *Tartary*, between thirty-nine and forty-seven degrees of north latitude; but it is now found in *Maryland* and other parts near it, from whence it is brought to *London*, and sent to the *East-Indies*, where it bears a great price; for it is confidently affirmed, that in *China* they will give three pounds of silver for a pound of this root. It is looked upon by the inhabitants as a panacea, and is their last refuge in all kinds of disorders.

PYRETHRUM, *Pellitory of Spain*, is about the length and thickness of a man's finger, and without it is of a blackish red; but it is white within, and has a most acrid burning taste, though it is without smell. This is brought from the kingdom of *Tunis*; but there is another kind which is more slender, and not so acrid. This root is remarkable for opening the salival ducts, and for procuring plenty of spittle; hence it is by some looked upon as a specific in the tooth-ach, from obstructions and catarrhs. It is likewise good in sleepy diseases, and the palsy of the tongue, when chewed and held in the mouth. It is seldom or never given inwardly except in glysters against sleepy diseases.

RHABBARUM VERUM, *true Rhubarb*, is a root brought to us in thick unequal pieces, from four inches to five or six in length, and three or four thick. It is a little heavy, and of a dusky yellow on the outside, but within it is of a saffron colour, and variegated with yellow in the same manner as a nutmeg; it is a little fungous, of a subacid bitterish and somewhat astringent taste, with an aromatic smell, but somewhat strong. It grows in *China*, and though we have had several figures of the plant, it is not certain that any of them are like it, which is somewhat strange, since it grows in all parts of that country, though principally near the great wall; it was formerly brought from *China* through *Tartary* to *Aleppo*, and from thence to *Alexandria*, and at length to *Venice*; but we have it now from the *East-Indies* and *Russia*. There is a sort that was sent to *Jussieu*, and called *Rhubarb with an oblong curled undulated leaf*. It was said to be the true *China Rhubarb*, and is now growing in the physick garden at *Paris*; there is also some of it in the physick garden at *Chelsea*. It was brought to Mr. *Rand*, the then gardiner, and was called by him the *Rhubarb with an undulated smooth leaf like Burdock*. These were generally thought to be the right sort; but Mr. *Milner*, the late gardener, affirms, that it was nothing else than the *Rhaponticum*. The faculties of *Rhubarb* are well known for both its purging quality, and for its general astringent of the stomach and intestines. It is supposed to open obstructions of the liver, and it

is excellent in loosenesses. It is so mild, that it may be given to all ages and sexes at all times. However, it is not proper when the intestines are very hot, and there is a feverish heat. It is good in the jaundice, that proceeds from a clammy thick bile, which stops up the biliary ducts. Some chew it in a morning before breakfast or dinner to help digestion. It is given in substance from half a scruple to a dram, and in infusion to two drams.

The true RHAPONTIC is the *Rhubarb* of *Diocorides*, and of the ancients, and is by some called the *English Rhubarb*. The impalement of the flower is composed of three small leaves, which are turned back; and the flower itself has three leaves, which are larger than those of the impalement, and are coloured. In the center of the flower is seated the three cornered pointal, supporting three small styles, and attended by six stamina; the pointal afterwards becomes a triangular seed inclosed by the petals of the flower. It is frequently cultivated in gardens, and of late years the first stalks of the leaves have been used for making of tarts in the spring of the year; but they must have their outward skin peeled off, otherwise they will be very stringy; they have an agreeable acid flavour. When they are propagated for use, they should be planted three feet asunder, and in rich ground.

SARSAPARILLA root is made like a rod of several ells in length, whose twigs are of the thickness of a goose-quill, and are tough, flexible, and streaked lengthways. The bark is thin, and the colour without is reddish, but ash coloured within; under this there is a white mealy substance, which is so soft, that it may be reduced to powder between the fingers; the taste is bitterish and clammy, but not disagreeable. Under this in the middle there is a woody bright tough substance, which is not easily broken. All these twigs or strings proceed from a single head as thick as a man's thumb, and scaly. It is brought from *New Spain*, *Peru*, and *Brasil*. It is sudorific, and attenuates gross humours. It has been reckoned a specific against a well-known disease, the gout, the palsy, and other chronic disorders; but its virtues are now most ap-

proved against the first. The method of using it is thus; to three ounces of the strings, which are good and not spoiled with age or other accidents, three quarts of river water must be added, and it must be made to boil as soon as possible, in an open vessel, till two pints of the strained liquor remain. This quantity is enough for twenty-four hours, and may be given at two or three times, either warm or cold. It must be made fresh every other day, and the patient's diet should be slender while he takes it. Some have given it from half a dram to two drams in substance, and to half an ounce in decoction; but the former method is best. After all, it is not to be wholly depended on for the before-mentioned purpose, unless it receives the assistance of mercury, and that properly prepared by a very skilful hand.

SENEKA is the root of a plant called *Polygala Virginiana*, with oblong leaves and white flowers; but it is known to us by the name of the Rattle Snake-root. It is usually about the thickness of the little finger, and is variously bent or contorted; it is divided into many branches with lateral fibres, and has a prominent membranaceous margin running lengthways; it is yellowish without, but white within, and has an acrid bitterish taste, but somewhat aromatic. It is thought to be good in all other disorders proceeding from a thick blood, particularly in the pleurisy and inflammation of the lungs, first letting the patient bleed. It has likewise been prescribed in nervous disorders, and slow fevers with success. The usual dose of the powder is about thirty grains. It will sometimes vomit and purge; but if the patient cannot bear it, it may be prevented by mixing a testaceous powder with the tincture, or by giving twelve grains of salt of tartar in weak cinnamon water.

SERPENTARIA VIRGINIANA, *Virginian Snake-root*, is slender, fibrous, light, brown without, and yellowish within, with a subacrid bitterish taste, and a fragrant aromatic smell, not unlike that of zedary. It is now reckoned a species of the *Aristolochia*, and is brought from *Virginia* and *Carolina*. It consists of a great number of strings or fibres matted together, that

proceed





Lidoary.

proceed from a single head. It is accounted a great alexipharmic, and is frequently given in malignant fevers, and epidemical diseases. It may be given in substance from ten to thirty grains, and in infusion to two drams.

TURPETHUM, *Turbeth*, is a root, or rather the bark of a root, cut into oblong pieces, about as thick as the finger, and is brown or ash coloured without, but whitish within, with a subacid nauseous taste. It is best when it is fresh, resinous, not wrinkled, and easily broken. It belongs to an *Indian* *Convolvulus*. It has been thought a proper remedy to purge off thick gross humours from the remote parts of the body, and has been commended in cold chronic diseases, especially in the gout, palsy, and dropsy. The dose is from fifteen grains to a dram; but an extract made of spirits of wine is best, of which a scruple is a dose: it is now not much in use.

ZEDOARY is a tuberosc root that is dense, solid, from three to six inches in length, and about as thick as a man's finger, terminating both ways in a blunt point; it is ash coloured without, and white within, with an acrid, bitterish, aromatic taste, and fragrant smell, which is most remarkable when it is chewed or pounded, and is somewhat like camphire. There is another sort called round Zedoary, that is in substance, weight, solidity, smell, and taste like the former; for it only differs in the shape, which is roundish, and only an inch in diameter. They are both brought from *China*; but the latter is seldom found in the shops. It has been greatly celebrated for its virtues: it promotes sweat, incides gross phlegm in the lungs, as well as in the stomach and intestines; it discusses wind, and cures the cholick proceeding from thence; it raises the spirits, and has been given in several chronic disorders. The dose in substance is from six grains to thirty, and two drams will serve as an infusion to be drank in the manner of tea.

ZERUMBETH is a tuberosc geniculated root, with an unequal surface, and is from the thickness of a man's thumb to that of his arm; it is a little flattish, and of a whitish yellow colour, with an acrid taste, not unlike ginger,

ginger, and a fragrant smell: it is seldom or never kept in the shops.

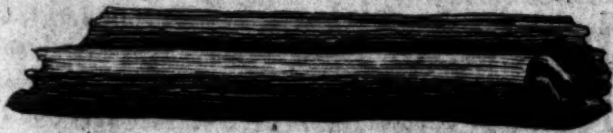
ZINGIBER, *Ginger*, is a well known tuberosc root, knotty, branched, and flattish, the substance is a little fibrous, of a pale or yellowish colour, and covered with a brownish skin, which is commonly taken off before it is brought to us. The taste is very acrid, hot, and aromatic, with a very fragrant smell. It is brought both from the *East* and *West-Indies*, where it is looked upon, while fresh, as an excellent remedy against the cholick, loosenesses of the belly, and windy disorders. It strengthens the stomach, helps digestion, and is said to strengthen the memory. It is often added to purges to correct them; but it should not be given in hot constitutions, for then it will do more harm than good. It may be taken in substance from five to fifteen grains, but it is oftener taken in infusion or decoction from half a dram to half an ounce. The dose of that which is brought over candied, is from a dram to an ounce.



C H A P. II.

Of BARKS.

CINNAMOMUM, *Cinnamon*, is a well known spice, it being a bark that is sometimes exceeding thin, and sometimes pretty thick, and rolled up into a sort of tubes or pipes of different lengths. The substance is leginous and fibrous, but brittle; the colour is of a yellowish red, with an acrid, pungent, pleasant, agreeable taste, and a most delightful smell. It is the second and inward bark of a tree called *Cannella Zeylanica*. It is commonly taken from trees that are three years old in the spring or autumn; the ash coloured outside is taken off, and then it is cut into pieces and exposed to the sun, and, when it is drying, it rolls itself up in the manner it is brought to us. When the tree is stripped of its bark, it continues naked for two or three years, and then another grows again, which serves for the same purpose. When it is distilled fresh, it yields plenty of oil, but when old
and



The Cinamon Tree.



and dry very little; however, it is of two sorts, one of which sinks to the bottom of the water, and the other swims on the surface. This last is pale, but the former is of a reddish yellow colour, though they are both limpid and of a most fragrant smell; but when they are tasted they are exceedingly pungent. When the bark of the root is distilled it yields an oil, with a volatile salt or camphire, which is lighter than water, limpid, yellowish, and soon flies away. It has a strong smell between camphire and cinnamon, and has a very pungent taste. The camphire got from it is exceedingly white, and has a much finer smell than the common sort; but it is extremely volatile, and takes fire immediately, whose flame leaves nothing behind it. The fruit of this tree is an oblong roundish berry, somewhat above a third of an inch long, and is smooth, green at first, but afterwards turns to a dusky blue, sprinkled with whitish specks. Under the green pulp there is a thin brittle shell containing a roundish kernel. It is common in the island of *Ceylon*, where it is in as great plenty as hazel trees with us. Cinnamon is heating, drying, aperient, discutient, and alexipharmatic; it strengthens the viscera, recreates the spirits, helps digestion, and discusses wind. It is given in substance from a scruple to a dram, and in infusion from one dram to two. The oil is so hot and burning that it is never prescribed alone; but it may be mixed with sugar, and then given with any fluid. The dose is from one drop to three. A single drop on a lump of sugar is an excellent remedy against hicoughing. Likewise, if a drop of it be put with cotton into a hollow tooth, it cures the tooth-ach by drying and burning the nerve. Cinnamon, tho' commonly used as a spice, should be avoided when the stomach is inclinable to an inflammation, for then it does more harm than good; nor is it proper for hot and dry constitutions.

CASSIA LIGNEA, *Woody Cassia*, is a bark brought to us in rolls like cinnamon, and has somewhat of the smell and taste, but weaker, for which reason it may be easily distinguished from it, besides which it is clammy when tasted; however, the best is that which approaches

nearest to Cinnamon. It has much the same virtues as Cinnamon, though in a smaller degree; and when given as an astringent, it is preferred to it, on account of its glutinous quality; it is good in loosenesses and to strengthen the viscera. The dose in substance is two scruples, and, when infused in half a pint of white wine, an ounce.

CASSIA CARYOPHYLLATA is the bark of a tree called the *Clove-berry-tree*, and is found in the island of *Cuba*, and other parts of the *West Indies*. It is as thin as Cinnamon, and of a dusky yellow. It is brought in rolls like cinnamon, and has a taste between cloves and that bark; but that of cloves is the most predominant. It grows stronger by length of time, and at length becomes so acrimonious, that the tongue is affected as though it was burnt with a slight caustic. It has the same virtues as cloves, but fainter.

CANELLA ALBA, by some called *Winter's-bark*, and by others *wild Cinnamon*, is rolled up in oblong tubes, in the same manner as cinnamon, but larger. It is thicker than cinnamon, and has an acrid, pungent, aromatic taste, as if it had been mixed with cinnamon, ginger, and cloves. It is accounted a good remedy against the scurvy; it dissolves wind, and is sometimes used in disorders proceeding from catarrhs. The dose is from half a scruple to a dram in substance, and to two drams in infusion.

CORTEX WINTERANUS VERUS, *true Winter's bark*, is brought over in tubes like the former, and has a covering of an ash colour, that is soft, fungous, unequal, and full of chinks; but within it is solid, dense, and of the colour of rusty iron, with an acrid, aromatic, pungent, burning taste, but the smell is extremely fragrant. It was brought from the *Straits of Magellan*, by *William Winter*, in 1567. It has been accounted excellent against the scurvy, for which some reckon it a specific. However, it is seldom or never to be met with in the shops, the *Canella Alba* being now used instead of it.

CORTEX PERUVIANUS, *Peruvian or Jesuits bark*, is generally from the sixth part of an inch to the fourth of an inch thick, and is rough on the outside, it being

being of a brownish colour; but sometimes is covered with a hoary moss; it is smooth within, a little resinous, and of a reddish rusty colour, with an intensely bitterish taste, and somewhat of astringency. Sometimes it is brought in large pieces, three or four inches in length or upwards, and an inch broad, and not rolled up, because it is taken from the trunk of the tree; sometimes inclining to tubes like cinnamon, though but slightly, and is marked with shallow circular chaps or fissures: this is taken from the slender branches. There is likewise a lesser sort, which is yellowish within, and hoary without, which is said to be obtained from the roots, and is in high esteem in *Spain*. It grows in *South America*, and particularly in *Peru*. It was at first greatly celebrated for its febrifuge qualities, and is still in the highest esteem upon that account. However, it has many other virtues, which have been discovered one after another; but that which was first remarked was its power in stopping mortifications. It is given, in various forms, for agues of every kind, and its tincture with saffron and snake-root is excellent in nervous, as well as in spotted fevers. It is good in the measles, and cures the strumous ophthalmia and hectic fever, and has been found excellent in the epilepsy, as well as the whooping cough, and spitting of blood. It is of great use in a consumption, and in the intermitting putrid fevers of that disease, as also in the hysteric passion. It is good in the king's evil, cures a pimpled face, and malignant ulcers. It is excellent for hemorrhages in general, and for hysteric convulsions. It is useful in tremblings, in languors, against the worms, as well as in a diabetes, and colliquative sweats, in which last case it performs wonders: in short, there is no single remedy yet found out that is endowed with so many excellent qualities. • However, there is one not yet mentioned, which must not be forgotten, and that is its being an excellent preservative in sickly aguish countries, in all parts of the world, and in sickly seasons. The dose of the bark in powder is half a dram, though some have given it to two drams; and if an ounce is infused in a pint of generous red wine, six ounces is a dose; however, it is certain, that when it

is given in substance, it is much more efficacious than either in infusion or decoction; but when patients refuse to take it in substance, the infusion in wine is undoubtedly the best. In whatever form this medicine is given, it must always be repeated every third or fourth hour, and in agues must be repeated again in eight days time from the cure. It will be still better to give it a second or a third time, that is, a few doses of it every eight days, and this process is generally necessary for autumnal agues; besides, it must be observed, that no evacuations of any kind must be made after taking the bark for some weeks, or even months after a cure is performed.

CORTEX ELUTHERIÆ is known abroad by the name of *Cascarilla*, has been sold for the Jesuits bark, and it is still called by some the grey *Peruvian* bark. It is rolled up in tubes of the thickness of the finger, and from two to four inches in length. It is thinner than the *Peruvian* bark, and is of a white ash colour without, but within of the colour of rusty iron, with a bitter aromatic taste, and a fragrant smell when burnt. It is thought to be good in diseases of the breast, particularly the pleurisy and inflammation of the lungs, as also in loosenesses attending acute fevers. By its sedative quality, it is useful in inflammations, though it is bad in the quinsy. It has produced good effects in internal hemorrhages, and in enormous vomiting, as well as in all fluxes of the belly. The dose is from six grains to a scruple, though it has been given to a dram three or four times a day.



CHAP. III.

Of Woods.

A GALLOCHUM, or LIGNUM ALOES, *Aloes Wood*, is of three kinds, and the first, which is best, is called Calambac by the *East Indians*. It is light, resinous, and as soft as mastic, for it will stick to the teeth and nails, and will melt over the fire with a very sweet smell; but the taste is bitterish and aromatic.

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The *Agallochum* of the shops is brought to us in fragments of various sizes, which are heavy, dense, and of a bay colour, variegated with blackish and resinous streaks: sometimes there are holes in it, as if it was rotten; but they are filled with a sort of reddish resin, and then the colour of the wood is of a purplish black. The taste of this is subacid, bitter, and aromatic, and the smell is very agreeable. It grows in the island of *Sumatra*, in *Cambaya*, and more especially in *Cochin China*. It is oftener met with in the shops than the former, because the price of that is exceeding great.

AGALLOCHUM, or LIGNUM ALOES OF MEXICO, is more light, porous, and not so resinous as that of the shops; the colour is of a brownish green, and the smell is sweet and fragrant, not unlike that of the true *lignum aloes*, but the taste is bitter. It is not only met with in *Mexico*, but in the islands of *Solor* and *Timor* in the *East-Indies*. It is seldom or never taken notice of as a medicine, but is used in making boxes, chests of drawers, and other things of that kind.

LIGNUM RHODIUM, *Rhodium Wood*, is a name given to woods of several kinds. It had its name from the island from whence it was brought, and was also called *Cyprinum*, because it was had from the island of *Cyprus*. This wood is of a pale yellow at first, but in time grows reddish; it is thick, hard, and solid, and marked with fat resinous knots, smelling like a rose. There is another sort of *Rhodium* brought from the island of *Jamaica*, and, though it smells like the true, it appears to be different on a careful examination.

GUAIAACUM, otherwise called *Lignum Sanctum* and *Lignum Vitæ*, the wood of *Guaiaac*, is solid, dense, heavy, and resinous, whose middle part or heart is of a blackish green, and variegated with pale green, and black colours; but the external part is of a palish yellow like box; it is of a bitterish and somewhat aromatic taste, with a mild acrimony, and the smell, when burnt, is somewhat fragrant, and not disagreeable. The bark is woody, thin, dense, smooth, and somewhat resinous, and consists as it were of several thin plates laid one upon another; the outside is of an ash coloured green, or blackish, variegated more or less with green spots,

intermixed with a livid or lead colour; it is pale within, of an acrid taste, and disagreeably bitter. It grows in the *West Indies*, and particularly *Mexico* and *New Spain*: This wood is full of resin, insomuch that a pint of rectified spirit of wine will extract at least two ounces thereof. When it is boiled in water for a considerable time, and afterwards gently evaporated, it will leave a mass that looks something like resin, which is balsamic, of an agreeable smell, and a somewhat acrid taste; when it is quite dry, reduced into powder, and taken as snuff, it will bring a large quantity of serum from the nose; besides which it is very friendly to the nervous parts of the head. *Guaiac* incises and attenuates gross humours, opens obstructions, promotes sweat and urine, strengthens the stomach, as well as all the rest of the viscera, cures inveterate obstructions of the liver and spleen, and is prevalent against the jaundice, dropsy, and other disorders thence arising. It is also good in the gout, rheumatism, and all sorts of pains in the joints. It is a great friend to the nerves, brings all cold hard swellings to suppuration, and yet it is never attended with the least bad consequence. The bark has the same virtues as the wood. Twelve ounces of the wood, macerated in three quarts of water for a day, and then boiled over a gentle fire till half or more is evaporated, and strained off, is called the cream of guaiac. We might here enlarge on its uses in venereal cases, and give the proper method of using it; but as this work is undoubtedly read by the young and inexperienced, such directions might lead the unguarded part of them into experiments destructive of their health and constitutions, since the best medicines, when improperly applied, may tend to hasten death rather than a cure; and, as the learned know where to look for informations of this kind, they will readily excuse an omission, which properly does not belong to Natural History.

LIGNUM TINCTILE CAMPECHENSE, *Eogwood*, is well known as a dye, and is commonly brought from *Camprachy* in the *Bay of Honduras*. It is but lately used as a medicine, and that in loosenesses, in which it is very efficacious; for if two ounces of the chips are
boiled





boiled in a quart of milk, and a quart of water to one quart, and a tea-cup full of this decoction be given every three hours, it seldom fails to cure a common diarrhoea.

LIGNUM NEPHRITICUM, *Nephritic wood*, is whitish or of a palish yellow colour, and is solid and heavy, with a subacid and a little bitterish taste; the bark is blackish, and the heart reddish or brownish. The wood has been recommended against disorders of the kidneys, and difficulty of urine.

SANTALUM RUBRUM, *red Sanders*, is a solid, dense, heavy wood, brought over from the *East Indies*, sometimes in strait and sometimes in crooked pieces. It is the heart of the tree, and has no remarkable smell, but it has a slight astringent, and austere taste. The virtues of these woods is not agreed upon by authors: however, they generally agree, that they are inciding, attenuating, astringent, and strengthening. But the yellow is the most powerful incider, and is more astringent than the red.

SASSAFRAS is the root of a large *American tree*, and is brought to us in long strait pieces, which are very light and of a spongy taste. It is of a whitish red colour, and the bark is spongy, ash coloured without, but within of the colour of rust of iron. The taste of the wood is acrid, sweetish, and aromatic, with a fragrant smell, not unlike that of fennel. Its virtues are sudorific and inciding, and it is good in the cachexy, green sickness, and dropsy. The oil of Sassafras is good in disorders of the breast, and particularly in coughs, pains, and spasms. It may be taken alone or dropped upon sugar, or a drop or two may be mixed with a powder good for the same purposes. It is a medicine not very commonly known, but exceedingly useful: *Sassafras* is also made use of like tea.

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CORALLINA, *Sea moss*, is a small marine plant, divided into a great number of sprigs, which are slender, brittle, and consist of several joints. Without it seems to be covered with a sort of a whitish stony substance, and the colour is various; for it is either white, reddish, yellowish, ash coloured or black, and sometimes of the colour of grass. It has a nauseous fishy smell, with a saltish disagreeable taste, and crackles between the teeth; it may readily be reduced to powder by rubbing it between the fingers. It is seldom above an inch and a half, or two inches long, and is found growing on rocks in the sea, as well as on stones, shells, coral, and the like. It has no root, and is very plentiful on the shore of the *Mediterranean* sea. That is esteemed the best, which is whitish or ash coloured. It is greatly cried up for its virtue in killing worms, and is given in powder from half a dram to a dram.

SCHOENANTHUS, *Camels Hay*, is brought in sprigs with the leaves, and sometimes with the flowers from *Arabia*; they are dry, stiff, round, shining, geniculated, and about a foot in length; it is full of a spongy pith, and is of a pale yellowish colour at the root, but near the top it is green or purplish; the taste is hot, subacid, bitterish, aromatic, and not disagreeable. It is now out of use, except as an ingredient in venice treacle and mithridate.

MALABATHRUM, *the Indian leaf*, is like that of the cinnamon tree, and differs nothing from it except in smell and taste. The tree, to which this leaf belongs, is called the white cinnamon tree of *Malabar*. It is now only made use of in venice treacle and mithridate.

SENNA, or **SENA**, consists of small dry, flattish, firm, and sharp leaves of a yellowish green. The smell is not very strong, but the taste is subacid, bitterish, and nauseous. It is of two sorts, the *Alexandrine* and that of *Tripoly*; which last is the worst, and the leaves are green and large, with a blunt point and rough to the touch.





touch. This medicine is in great use, as a purge, being seldom or never attended with the bad consequences of drastic purges. It is apt to gripe; for which reason physicians have endeavoured to correct it in various manners; some with ginger, others with cinnamon, and others again with spikenard. Some mix it with prunes, jujubs, raisins, violets, marsh mallows, and polypody of the oak; others with things that dissolve wind, and incide gross glutinous humours, such as fennel-seeds, anniseeds, coriander-seeds, and salt of tartar. Senna is not good in those disorders, in which the fluids are hot, and the solids tend to an inflammation, particularly in hemorrhages, all inflammations whatever, and diseases of the breast. In an infusion, or gentle decoction, it is prescribed from a dram to half an ounce, either alone or with other purging medicines. Some have endeavoured to correct its disagreeable taste by various additions, which however have not succeeded extremely well; particularly, they have recommended the greater water fig-wort for that purpose; but as it has a strong smell, and a nauseous bitter taste, it can do little good this way; while others have recommended bohea tea with as little success.

DICTAMNUM CRETICUM, or DICTAMNUS CRETICA. *Dictamnus of Crete*, is a leaf, of a roundish shape, about an inch long, and of a greenish colour, and covered with a thick white down. It is generally brought over with the stalks, from whose tops a sort of spike of scaly leaves depend, of a purplish colour. The smell is fragrant and not disagreeable, and the taste is acrid, aromatic, and hot. The dose in powder is from half a dram to a dram, and in infusion from a dram to half an ounce; but it is only used with us in venice treacle and mithridate.

THEA, Tea, is a small dried curled leaf, with a taste bitterish in a small degree, and slightly astringent; the smell is very agreeable, and by some is likened to that of new hay, or violets. It is brought from *China*, and has variety of names; but it may principally be divided into three kinds, namely, the green, the imperial, and the bohea. The green is of several sorts, and is of various degrees of goodness, from the com-

mon coarse green tea to the hyson, which is now the dearest and accounted the best of all. The imperial tea is so called, because it is chiefly used by the emperor and great men in *China* and *Japan*. The leaf is large, and not so much rolled up as in the other kinds: the colour is greenish, lively, and of a fine smell, with an agreeable taste. This, not many years ago, was in great request with us; but now we either have it not at all, or it is sold under a different name. The bohea is of a reddish brown colour, and the leaf is small, rolled up, and tinges the water of a brownish colour; but the difference of taste of these teas are so well known they need not be insisted on. Some authors assure us there is no difference between the green and bohea teas, but what arises from the manner of curing them; for the bohea is said to be higher dried, or rather burned, from which it receives its different taste and colour. The natives throw the bohea into a brass vessel full of water, and boil it over a slow fire, where they keep it the whole day, and it serves for their usual drink; but these are the common sort, for others are much more nice and careful in preparing it. The *Japanese* grind their tea into a small powder, and then put a spoonful of it into one of their cups, pouring hot water thereon, and then they beat them together with a sort of a brush composed of long bristles, till a foam arises thereon; but the *Chinese* make use of it in the same manner as we do. Tea is certainly of some use in abating the acrimony of the humours, and in keeping people awake, but more especially in those who drink it but seldom; however, when others take it late at night, it very often prevents their sleeping sound. It is gently astringent; for which reason it hinders the water from weakening the stomach, and in those that take it but seldom it will prevent the operation of a purge. It has indeed some power in preventing the gravel, but then it does not arise from the tea, for hot water alone will do the same. In general it may be observed, that tea has different effects on different people, and therefore, though it may be good for some, it is hurtful to others.

STOECHAS ARABICA, *French Lavender*, consists of the florid tops of the plant, which, when dried, are called *Stoechas*; they are oblong, scaly, and of a purplish colour, with a subacid bitterish taste, and a fragrant pleasant smell. Though it is called the *Arabian Stoechas* it is brought from the southern parts of *France*, where it grows spontaneously. It is now cultivated with us by sowing the seeds upon a bed of light dry soil in *March*. When the plants are come up they should be carefully cleared from weeds, till they are two inches high, at which time they should be removed into a light dry level ground prepared for that purpose, and set at about five or six inches distant from each other, observing to water and shade them well till they have taken root. It has a labiated flower, consisting of one leaf, whose upper lip is upright and cut into two; but the under lip, or beard, is cut into three parts; and both are so divided as at first to appear like a flower cut into five segments, out of whose flower cup rises the pointal, attended by four embryos, which afterwards become so many roundish seeds inclosed in the flower cup. The flowers are ranged in various rows with scaly heads, out of the top of which peep some small leaves which look very beautifully. The *Stoechas* used in the shops is still brought from the south parts of *France*; but as it is apt to contract a mouldiness in its passage, it is not near so good as that gathered fresh in *England*. It is recommended in cold disorders of the head and nerves; however, it is rarely met with in prescription, but is used in *venice treacle* and *mithridate*.

CROCUS, *Saffron*, grows in various parts of the world, but it is no where better, if so good, as in *England*. At present it grows plentifully in *Cambridgeshire*, and in all that large tract of ground between *Saffron-Walden* and *Cambridge*. They begin to plough the ground in the beginning of *April*, and about five weeks after they lay between twenty and thirty loads of dung upon each acre of ground, but the shortest rotten dung is best; and this they plough into the ground. Soon after *Midsummer* they plough it again, and the time of planting is the latter end of *July*; the method of which is this: one man with a shovel raises between three and four

four inches of earth, and throws it before him about six inches; two women follow him with the heads of saffron, and place them in the farthest edges of the trench, which is made at three inches distance from each other. As soon as the digger has gone once the breadth of a ridge, he begins again at the other side, and digging before covers the root last set, and makes room for the setters to place a new row; and thus they go on till a whole ridge is planted. The quantity of roots planted in one acre is generally about a hundred and twenty-eight bushels. When the leaves are ready to show themselves above ground, they pare the ground with a short hoe, and take off the weeds. Some time afterwards the saffron flowers appear, which are gathered before, as well as after, they are full blown, and the most proper time is early in the morning. They carry them home in baskets, spread them on a large table, and pick out the chives with a pretty large part of the style itself; but the rest of the flower they throw away as useless. They then dry them on a kiln, which is built on a thick plank, supported by four short legs, that it may be removed from place to place. It is set in the lightest part of the house, and they begin by laying five or six sheets of white paper on a hair cloth, upon which they spread the wet saffron between two and three inches thick; this they cover with other sheets of paper, and over all they lay a coarse blanket five or six times doubled. At first they give the kiln a pretty strong heat to make the chives sweat. When it has been dried about an hour, they turn the papers and saffron upside down, covering them as before. The same heat is continued for an hour longer, and then they take off the papers, cover the saffron as before, and lay on a weight. Then they have nothing more to do than to keep a gentle fire, and turn the cakes every half hour till thoroughly dried, which is generally performed in twenty-four hours.

Saffron has a flower consisting of one leaf, which is shaped like a lily, and fistulous underneath, the tube widening into six segments, and resting on a foot stalk; the pointal rises out of the bottom of the flower, and is divided into three headed and crested capillaments; but

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the impalement afterwards turns to an oblong triangular fruit, divided into three cells, and is full of roundish seeds. It has a tuberoso root, and long grassy leaves, with a longitudinal white furrow thro' the middle of each. The parts of the flower used in medicine are the three long stamina or chives, of a reddish flame colour. Saffron is endowed with great virtues, for it refreshes the spirits, and is good against fainting fits and the palpitation of the heart; it strengthens the stomach, helps digestion, cleanses the lungs, and is good in coughs. It is said to open obstructions of the viscera, and is good in hysteric disorders. However, the use of it ought to be moderate and seasonable; for when the dose is too large it produces a heaviness of the head and a sleepiness; some have fallen into an immoderate convulsive laughter, which ended in death. A few grains of this is commonly a dose, though some have prescribed it from half a scruple to a scruple and a half.



CHAP. V.

Of Fruits and Seeds.

DACTYLI, *Dates*, are oblong fruit of a roundish shape, of the thickness of a thumb and the length of a finger. They are in the form of acorns, and composed of a thin dusky yellow skin, with a fat, firm, sweet pulp, and a thick, oblong, hard stone, furrowed longways. Those are best that are large, soft, yellowish, with few or no wrinkles, and full of pulp. Dates are distinguished according to their degrees of ripeness: the first is when the end begins to grow ripe, the second when it is ripe to the middle, and the third when it is ripe in every part. With regard to the virtues of Dates, they are said to strengthen the stomach, stop loosenesses, and corroborate the intestines; they are also good in diseases of the breast, and promote the expectoration of gross humours. The tree that produces them grows in several parts of the world, particularly in *Arabia, Syria, Persia, Africa*, as well as in *Greece*,

Greece, Italy, and the southern parts of France; but they do not thrive so well in these last places, and the fruit seldom comes to perfection.

SEBESTÆ is a fruit not unlike small plumbs, which are blackish, turbinate, pointed at the top, and wrinkled. They consist of a dusky clammy pulp of a sweetish taste, which adheres firmly to the stone. It is in common use in some parts of *Europe* to abate the acrimony of the humours, and to appease coughs proceeding from a soft phlegm, as well as in hoarsenesses and heat of urine. They are out of use with us, and consequently are not kept in the shops.

UVÆ PASSÆ, *Raisins*, are the ripe fruit of the vine dried in the heat of the sun, and are universally known. There are several sorts, though not all known to us, as the raisins of *Damascus*, which are the largest; the raisins of *Provence*, which are of a middle size; and the raisins of *Corinth*, with us commonly called currants. Those of *Damascus* are most in use with us, and are named raisins of the sun. There is also another sort brought from *Spain*, which are pretty much in use, called *Malaga* raisins. The vine that produces the larger raisins is like other vines, only the leaves are bigger, and not divided so much on the edges. The common use and taste is known to every one, and as to their physical use they are said to attenuate gross humours, and to abate their acrimony. Those called jar raisins, being stoned and eaten frequently, are excellent in obstinate hoarsenesses. They are sometimes used in decoctions to abate the disagreeable taste of other medicines.

CARICÆ, *dried Figs*, are so well known that they need no description. The flowers which are always inclosed in the middle of the fruit, consist of a single leaf, and are male and female in the same fruit; the male flowers are seated towards the crown of the fruit, and the female, which grow nearer the stalk, are succeeded by small hard seeds. The entire fruit is for the most part turbinate and globular, or of an oval shape, and is fleshy, and of a sweet taste. Fresh figs, as well as those which are dried, serve among other things for food in some distant countries; and when they



Myrobalans.

Prond sc.







they are ripe they are easy of digestion, and perhaps more so than any common fruit whatever. They are moderately nourishing, soften the belly, and are good in disorders of the lungs, kidneys, and bladder; however, the too frequent use of them is hurtful, because they generate wind. When they are dried they have the same qualities, but are better for medical purposes. They are sometimes used in pectoral decoctions, and six figs are enough for every pint of liquor. Externally they are sometimes applied in the form of a cataplasm, to disperse or ripen swellings. Some roast them, and apply them to swellings of the gums, and others to ease the pains of the piles.

MYROBALANI, *Myrobalani*, are of several sorts; but the yellow are principally used in medicine, and are a dried fruit, of an oblong roundish turbinated shape, an inch and a quarter in length, and three quarters of an inch in breadth; they are blunt at both ends, and of a yellowish or citrine colour. They are marked generally with five larger streaks, and as many that are small between them; under the glutinous and as it were gummous bark, or rind, half a quarter of an inch thick, which is bitter, austere, and subacid, there is a stone of a lighter colour, that is angular and oblong, with several pits or cavities; the kernel is whitish, and covered with an exceeding thin dark yellow membrane. The rind or pulp, for they are both together, is the only part in use. They proceed from a tree like that of wild plumbs, whose leaves are set by pairs like those of the ash tree.

The **CHEBULE MYROBALANS** are the largest, and are oblong, angular, and said to purge phlegm. They are like the former, but bigger, and more turbinated, and have likewise five high ribs made by the streaks or furrows; but they are of a darker colour, and more inclinable to brown; within they are of a blackish red, but taste as the former, though the pulp is thicker, and the kernel is fat, oblong, and of the same taste. They grow on a tree not unlike a peach tree.

Indian, or black MYROBALANS, are less than the yellow, and are marked with nine oblong lines; they are

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are rather wrinkled than streaked, and are blunt at both ends. They are black on the outside, and within are of a shining black like pitch. The taste is subacrid, bitterish, and a little acrid; they adhere to the teeth and provoke spittle. The tree grows to the size of a wild plumb-tree, which has leaves like those of willows.

The **BELLIRIC MYROBALANS** are a roundish fruit, of the colour and shape of a nutmeg, but a little more yellow and almost an inch in length; the rind is bitter, austere, and astringent; under which lies a stone of a lighter colour, containing a kernel like that of a hazel nut.

EMBLIC MYROBALANS are a dried fruit, of a round shape, but marked with six angles, and of a blackish ash colour. They are half an inch in diameter, and under the rind, which when ripe opens in six places, there is a white lightish stone of the size of a hazel nut divided into three cells. Generally speaking, there is nothing but the dried segments of the pulp or rind brought over, which are of a blackish colour, and of a tartish austere taste. They grow on a tree higher than any of the former, but we have no accurate description thereof, nor indeed of any of the former. They have been looked upon to have a purgative faculty, without producing the least weaknesses, and by their astringency they strengthen the bowels. The dose is from an ounce to an ounce and a half, but the present practice has laid them aside.

COLOCYNTHIS, *Coloquintida, or the bitter apple*, is about the size of an orange, of a roundish shape; the pulp when dried is spongy, and, as it were, full of cells; it consists of small membranaceous leaves, which are dry, white, and exceeding light when brought to us. It is of a very bitter, acrid, nauseous taste, and it has small, flat, hard, white or reddish seeds, of the size of those of a cucumber, but rounder and harder; it is brought from *Aleppo*.

It is now in use as a medicine, and is a most strong violent purge; therefore only proper to be used in desperate cases, and in obstinate inveterate diseases. It has sometimes very dangerous effects, for it greatly injures





Cassia Fistularis.

Prond. ex.

inures the stomach, viscera, nerves, and even the whole body. It is often mixed with other purgatives, to render the operation more quick, and particularly with aloes and scammony. The dose of it, when given alone, is from five grains to twenty, when reduced to a fine powder. It has such a purging faculty, that when laid to the navel with oxes gall it not only purges but kills worms.

CASSIA FISTULARIS, *the pudding pipe tree*, is an exotic fruit contained in pods sometimes half a yard long, and about an inch in diameter; it consists of a woody shell, of a dark brown colour, but though it is hard it is thin. It is divided into several cells with partitions transversely placed, and parallel to each other; the pulp is soft, black, sweetish, and of the consistence of honey, containing oblong, roundish, flattish seeds, that are hard, shining, and of a dusky yellow. Those pods are best that are fresh, full, and will not rattle when shaken. The pulp only is in use, which is taken from the pods, and is passed through a sieve. It is looked upon as a mild, gentle, harmless purge, agreeing with all sexes and ages. The tree from whence it proceeds has been planted in the *West-Indies*, but as it does not grow naturally there, it does not succeed very well; for it has a thicker shell, and the pulp is acrid and nauseous. As a cathartic it must be given in a large dose, but a small one is sufficient to keep the body open. Some have complained of its bad effects, and say it produces wind in the stomach and intestines; but by mixing it with cream of tartar, or boiling it with tamarinds, this may be prevented.

TAMARINDI, *Tamarinds*, are a fruit with a thick clammy pulp, brought to us in masses of a blackish colour, with an acrid taste, and mixed with the rinds of the pods as well as membranes, nerves, and filaments; as also with the hard seeds or stones. That pulp is best that is clammy, of a blackish red, acrid and moist. It is to be cleansed from the membranes, filament, and seeds, before it is used. It is brought from *Egypt*, and the *East and West-Indies*.

The flower consists of several leaves, which are so placed as to resemble in some sense one that is papilionaceous;

meaceous; but they expand circularly, and from the many leaved flower cup there arises a pointal, which afterwards becomes a flat pod, containing many flat angular seeds, surrounded with an acrid blackish pulp. The pods of the tamarind-tree in the *East Indies* contain six or seven seeds in each; whereas those of the *West-Indies* have seldom more than three or four. They may be propagated in *England*, by sowing the seeds on a hot bed in the spring, and when the plants are come up they should each be set in a separate small pot, filled with light rich earth, and plunged into a hot bed of tanners bark to bring them forward, observing to water and shade them till they have taken root. They must be constantly kept in the bark stove both winter and summer. When rightly managed, they will grow to the height of three feet in one summer from the seed. Tamarinds, besides their purging quality, temperate the acrimony of the humours, abate the heat of the bile and blood, quench thirst, and are good in acute burning fevers. They serve to correct the faults of violent purgatives, and to quicken those that are sluggish. The dose is from one dram to an ounce, and in decoction from one dram to three ounces.

CARDEMOMUM, *Cardomum*, is of several kinds, of all which some account will be given. The seeds of the greater *Cardomum* are contained in a dried oblong fruit, about the size of a fig, and much of the same shape, with a broad circular navel at the top, divided in the middle into three parts, and including in a thin, membranaceous, tough, fibrous, wrinkled, brown or reddish colour, a great number of seeds in three cells, which are uneven, shining, reddish, and lodged in a sort of membranes that lie between them.

The middle sized **CARDOMUM** of *Matthiolus*, or the greater *Cardomum* of *Bontius*, is an oblong fruit, of the length of an inch or an inch and a half, but slender, triangular, streaked and blunt at the top; it is of an ash colour, not easily broken, and divided into three cells that contain a great number of seeds wrapped up in thin white membranes. It is oblong, angular, thin, and on one side divided by a sort of small pipe, and there are several transverse lines run across it. It is of
a reddish

a reddish white colour, with an acrid aromatic taste. This sort is very common.

The *lesser CARDOMUM* of *Matthiolum* is the *Cardomum* of the ancient *Greeks*, and is a dried fruit with a short membranaceous pod, not half an inch in length, of a triangular shape, but sharpest at the pedicle, and blunt at the extremity; it is of a reddish colour, streaked, and has a much thinner shell than the middle sized *Cardomum*. When it is fully ripe the three corners gape, and discover three cells, containing a double row of angular, wrinkled, reddish yellow seeds, but white within, and of an acrid, bit-terish, aromatic taste, somewhat like camphire. It is brought from the *East-Indies*. In the places where they all grow they are used as spices, and are said to help digestion, to strengthen the stomach and brain, and to promote urine. The dose is from ten grains to a scruple in substance, and in decoction to half an ounce. They are much used in the present practice, that is the greater sort, and are a very warm grateful spice.

AMOMUM VERUM, the true *Anomum*, brought from the *East-Indies*, is a dried fruit growing in small bunches, consisting of ten or twelve berries or membranaceous bladders, which are fibrous, and brittle, lying close to each other without pedicles. The bunch is supported by a woody sprig, which is fibrous, round, and the length of a man's thumb. It is adorned with leaves, as well as a row of small scales, where there are no berries, and there are six long leaves surrounding each berry or grape like a flower cup. Three of the longest leaves are half an inch in length, but the other three are smaller, and scarce show themselves above the grapes. The thickness and shape of the berries are like that of a middle sized grape; each contains three rows of seeds, separated from each other by a thin membrane, and each row consists of several angular seeds, wrapped up in the same thin membrane, and lying so closely together that they appear to be only three long seeds. The whole bunches are of a wood colour, but paler in some than others. The seeds are solid but brittle, and the smell is fragrant, not much unlike

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unlike that of lavender, but sweeter; however, when they are taken out of their shells, the smell is more acrimonious, and they have an acrid taste. They are said to contain many virtues, but at present are only used in venice treacle.

CUBEBAE, *Cubebs, of the shops*, are a fruit, or round dried grains like pepper, and sometimes bigger, with a long slender pedicle, and a wrinkled darkish ash coloured shell, containing a single seed of a roundish shape, blackish without, and white within, with a sweet, acrid, aromatic taste, but not so hot as pepper. They are said to be good in diseases of the head, to create an appetite, to strengthen the stomach, and to disperse wind. The dose is from three grains to a scruple, and infused in wine from a dram to two drams.

PIPER, *Pepper*, is of several kinds, as *black pepper*, *white pepper*, *long pepper*, and *Jamaica pepper*.

PIPER NIGRUM, *black pepper*, is a dried fruit or grain, of the size of a small pea, with a wrinkled, brown or black rind, which taken off, a hardish compact substance appears of a yellowish green colour, but white within; the taste is acrid and hot, and seems as it were to bite the tongue. It grows on a shrub, with a small, fibrous, tough, blackish root, which sends out many shoots that are tough, flexible, green, and woody, which lie on the ground like hops, unless they are propped up; there are several knees, or knots, which when they lie upon the ground will send out shoots; and at each knot there are leaves alternately disposed, and opposite to each other, that are roundish, two or three inches broad, and four long, terminating in points; the texture is thick and firm, and on the upper part they are of a shining dusky green; but beneath of a light green, and have short, thick, green pedicles. The flowers grow in bunches, and are monopetalous, but divided into three parts at the edges, to which succeed the grains, which are ten, twenty, or thirty in number upon one pedicle, and are green at first, but red when ripe; but in drying they grow black and wrinkled. When the rind of black pepper is taken off, it becomes white, and is the only sort brought to us by the name of white pepper. Black pepper



Black Pepper.

Frond. v.

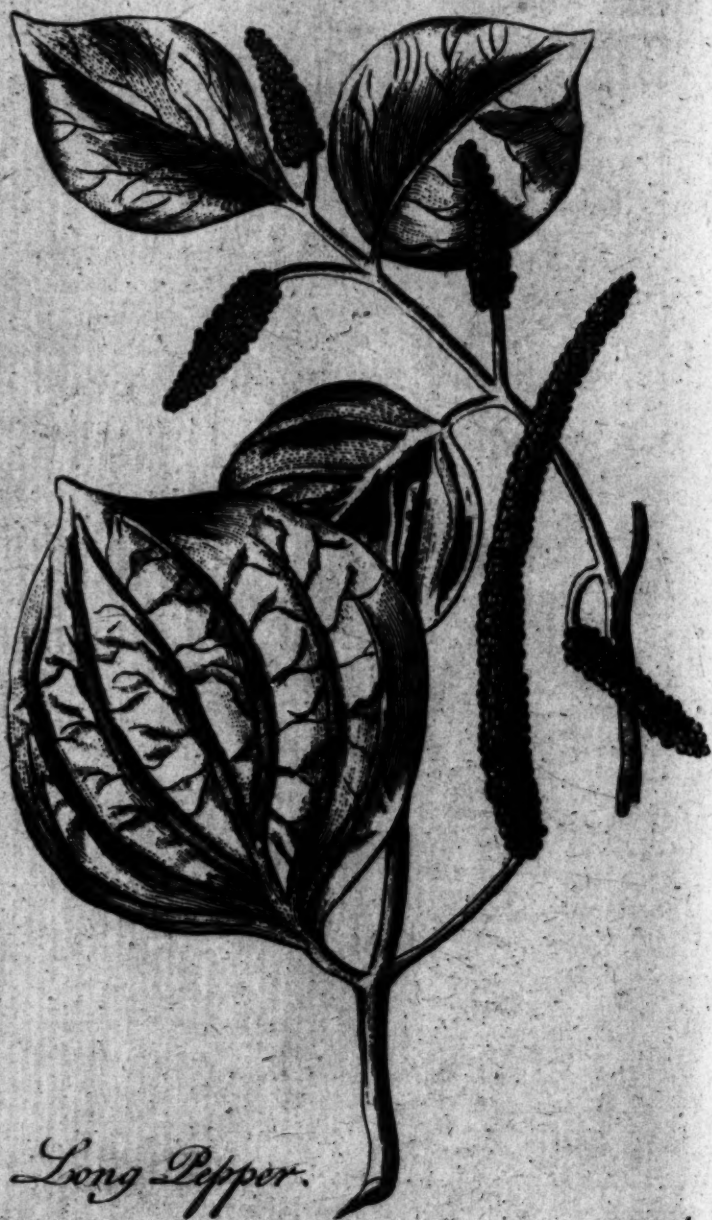






Jamaica Pepper.





Long Pepper.

OF VEGETABLES.

pepper is met with in *Java*, *Sumatra*, and on all the coasts of *Malabar*.

Long PEPPER is an unripe dried fruit, about an inch or an inch and a half long. It is oblong, round, cylindraceous, and as it were streaked with spiral lines, with tubercles placed in the form of a net; within it is divided into several small cells, containing each a small round seed, scarcely the twelfth of an inch in breadth, blackish without, but whitish within, with an acrid, hot, bitterish taste.

Long pepper is commonly pickled, and is in high esteem among some. It is very good in cold phlegmatic constitutions. They have all much the same virtues; for they heat, dry, attenuate, resolve, open and strengthen relaxed fibres of the viscera; and by exciting an oscillation therein, refresh the spirits, divide gross humours, and encrease the circulation of the blood.

PIMENTA, *Jamaica pepper*, by some called all spice, because it has somewhat of the taste of every one, is a dried unripe fruit, of a roundish shape, and generally somewhat larger than black pepper; the skin is brown and wrinkled, with a navel on the top, which is divided into four parts, and contains two black kernels covered with a greenish black membrane. The taste is a little acrid, aromatic, and somewhat like that of cloves. It grows in several parts of the *West-Indies*, is gathered while green, and dried in the sun for many days; but they are taken in night and morning to avoid the dew. It is used as a spice, strengthens the stomach, helps digestion, and refreshes the spirits.

CARYOPHYLLI AROMATICI, *Cloves*, are a dried unripe fruit, somewhat in the shape of a nail, and a little quadrangular, wrinkled, and of a blackish red. On the top there is a head, much about the bigness of a very small pea, which is composed of scales wrapped one into another, and round about it there are four small leaves, not unlike a flower cup, and disposed like a star, between which, in a cavity, there is a small quadrangular style of the same colour. The taste is acrid, bitterish, and agreeable, with a most

fragrant smell. Cloves are the flower cups and embryos of the fruit before the flowers are expanded, and are gathered from the month of *October* to *February*. When fresh, they are of a dark red, for they come blackish by being dried in the sun and by smoke. They grow in several islands of the *East-Indies*, which are all now in the hands of the *Dutch*. Its principal use is as a spice, though it is said to be good against all cold disorders of the brain, swimming of the head, and weakness of sight; it is also good for a cold stomach, and hysterical disorders. The dose in substance is from three grains to a scruple; but in infusion from thirty grains to two drams.

ACAJOUS, or **CAJOUS**, by some called the occidental anacardium, and by the *French* the *nut of Acagout*, but by the *English* the *cashew-nut*, is a fruit, or rather a nut, of the shape of a kidney, and of the size of a chestnut; it is covered with an ash-coloured, or brown skin, about a twelfth part of an inch thick, hard and tough; it seems to consist of a double membrane with a fungous substance, which in its cells contains a sort of oily fluid of the consistence of honey; it is of a reddish colour, extremely acrid, bitter, and biting; for if a drop of it falls on the skin, it seems to burn it like a caustic; and if any one through ignorance should bite the nut, the lips and tongue are immediately affected with a very sharp pain. Under this is the kernel, which is covered with another brown skin of the thickness of paper, whose substance is extremely white, compact, oily, and of a more agreeable taste than almonds. The tree that produces this nut is one of the best fruit-trees in all *America*, some of which are of the size of standard apricot-trees; and sometimes are pretty regular, but generally the branches are crooked, knotty, and are strangely contorted among each other. The wood is greyish, pretty strong, tough, and heavy; the bark is thin, smooth, and of a dirty white, a little variegated with brown specks and lines. The leaf is large, firm, well fed, pretty thick, and more round at the top than at the bottom. The flowers are small, and grow in tufts, and when they are opened they are divided into five leaves,



West India Anacardium?



leaves, which form a flower cup of small stamina of a yellow golden colour, that surround a pistil of the same colour but longer; the leaves that compose the flower are whitish at first, and afterwards turn to a purple mixed with white lines; but they are of small duration, for the pistil soon changes to a fruit. The tree, either spontaneously or cut, yields plenty of gum, that is reddish, transparent, and solid; it will dissolve in water like gum-arabic, and supplies the place of glew; when the juice is expressed from the fruit and fermented, it becomes a sort of heady wine, which greatly promotes urine, and the spirit distilled from it is very good. The thick fluid abovementioned tinges linen of a rusty iron colour, which can hardly be got out. Some get an oil out of it, which will stain linen with a black colour that can never be got out, and if any wood be smeared with it, it preserves it from rotting. The oily fluid first taken notice of is used for taking off warts and corns, when mixed with the black wax of *Gaudaloupe*, or warm water. The ladies make use of it to take off freckles, for it soon destroys the cuticle, which is succeeded by one that is fair and of a good colour. When the kernels are put into water, the skin will readily come off, and then they are fit to eat; but when they are dry, they open it a little with a knife, and then lay them over the fire, by which means the skin may be easily taken off. They are in very high esteem among the inhabitants of the *West-Indies*, not only to eat by themselves, but to make mackeroons and marchpains; besides which, they give to rosa solis and other liquors a very fine flavour. They may be transported to any distant country, and will continue good for many years.

BEN, is the *Balanus Myrsefica* of the shops, and is a nut of the size of a hazel-nut, but of different shapes, for it is sometimes oblong, roundish, or triangular; it is covered with a whitish shell, which is pretty thick and brittle, and contains a kernel covered with a fungous skin as white as snow, and of the same consistence as an almond; it is fat and of a bitterish taste. Eight pounds of the kernels will yield thirty ounces of a yellow limpid oil by expression. This nut is of

great use among the perfumers for extracting the fine smell out of flowers, because it will never grow rancid, and has no smell of its own.

CACAO, or COCAO, the cholocate-nut, are oblong, roundish, and of the size of olives; and are covered with a thin, hard, brittle, blackish shell, which, being taken off there remains a firm, dense, dry, flattish kernel, of a dusky yellow on the outside, and reddish, or of a bay colour within. They consist of several pieces closely united together, and have a little bitterish and slightly acerb, but not a disagreeable taste. Some take notice of four sorts of the trees, which grow spontaneously, and without any cultivation, in many parts of *America* between the tropics; particularly near the river of the *Amazons* there are whole forests of them. The wild cocoa-tree is very large, and thick of branches; but those that are planted are cultivated in such a manner, that they never exceed twelve or fifteen feet in height, not only that the fruit may be gathered more easily, but that they may not be too much exposed to the wind. The leaf is generally eight or nine inches long, and sometimes more, but seldom less; and the breadth is one third of the length. It is pointed at both ends, and has a strong stalk two or three inches long. It is of a lively green above, but deeper beneath, and the edges, from the place where it is broadest to the point, is of a very fine flesh colour. The fibres or nerves are like those of the cherry tree. This tree is an evergreen. It bears fruit twice a year, as well as most of the trees in these parts of *America*; but more properly speaking, it is never without flowers or fruit; however, the produce is most plentiful near both the solstices, but that near *Christmas* is always the best. The flower is small, and has six leaves when opened, which form a small cup, in the center of which is a longish button, surrounded with five filaments and five stamina. The leaves of the flower are of a pale flesh colour variegated with red spots and specks; the filaments are of a reddish purple, and the stamina are of a fine silver colour; but the button is of a duller white, and it is this that produces the fruit. The flowers do not proceed



The Coco-nut Tree.



ceed from the branches, as in the *European* trees, but from the root up to one third part of the five large branches. The fruit that succeed these flowers resemble cucumbers, and are pointed at the end; but on the sides there are furrows like those on melons, among which are small unequal tubercles, and these contain the nuts before described; besides which they contain a substance, or pulp, of a palish colour, which is very light and delicate, and of the same taste as pomegranates. Within this pulp are the nuts, of which there are twenty-five in number in each pod. The trees are in greatest perfection when they are ten or twelve years old, not because they bear more, but the largest fruit. The chief use of these nuts is for making chocolate, which is every where very well known, and is said to have restorative qualities; for which reason it is good in consumptions, prepared with milk, for then it abates the acrimony of the humours.

PISTACHIA, *Pistachio nuts*, are of the size and shape of hazle-nuts, only they are a little angular, and higher on one side than the other. They are covered with a double shell, the outermost of which is membranaceous, dry, thin, brittle, and reddish when ripe; but the other is woody, brittle, smooth, and white, under which is a kernel of a pale greenish colour, and of an oily, bitterish, sweetish taste, and agreeable to the palate; it is covered with a red skin. It grows in *Persia*, *Arabia*, *Syria*, and the *East Indies*; and is cultivated in *Italy*, *Sicily*, and the southern parts of *France*. They yield good nourishment, and are said to be restorative, causing those that are fallen away to regain their flesh very soon. They have been used to make emulsions in the same manner as almonds.

PINEI NUCLEI, *Pine-apple nuts*, are oblong, round, white, fat, sweet, covered with a reddish coat, and are included in a thick hard shell. These nuts are contained in the pine apple, or cones, between their hard and woody scales. They contain a great deal of oil, which may be gained by expression; and are said to be very nourishing, but they are not easily digested. Some account them good for consumptive patients, because they destroy the acrimony of the humours; they

are also good in heat of urine, and in ulcers of the kidneys and bladder.

COFFEE is a hard seed in an oval form, and somewhat above a third of an inch long, and a quarter of an inch broad; one side is convex and the other flat, marked with a remarkable furrow. It is yellowish or of an ash coloured palish green, it has a farinaceous taste, and before it is roasted has not much smell. The cup of the flower consists of one leaf, which is divided at the top into five segments, and the flower likewise consists of one leaf in the shape of a funnel, and divided into five segments; the flowers are succeeded by berries, which split in the middle. The coffee-tree is propagated by seeds, which should be sown soon after they are gathered, otherwise they will not grow, which is the reason that all other countries, except *Arabia*, have been so long without it. It was necessary to get trees that were growing, which has been at length done, and there are now many of them as well in *Europe* as in *America*; but they succeed best in the *Caribbee* islands; however, the coffee is not accounted so good as the *Arabian*. The berries are commonly ripe with us in *April*, at which time they should be sown in pots of fresh light earth, covering them about half an inch thick with the same; and then the pots should be plunged into a moderate hot bed of tanner's bark, observing to refresh them often with water; as also to raise the glasses in the heat of the day to admit fresh air; and in very hot weather it will be proper to shade the glasses with mats.

The blossoms, or flowers, are white, and shoot out just where the stalks of the leaves join the branches; when the blossoms fall off there remains a small fruit, which is green at first, but as it ripens becomes as red as a cherry, and not unlike one; and it is very good to eat, being strengthening and refreshing; under the flesh of the fruit, instead of a stone, there is the berry, covered with a fine thin skin. When the fruit has been dried by the sun, the pulp becomes a shell of a deep brown colour, under which there is a thick brown liquor extremely bitter. Some direct the taking off the pulp of the berries before they are sowed, but this is a mistake; for they will come up sooner when it is left on, and

and produce stronger plants. There are two seeds in each berry, which seldom fail to grow; but, when the plants are young, they may be easily parted and set in different pots, and about an inch and a half high. In the winter season they should be placed in a bark stove, and kept up to the heat proper for pine-apples. In *Arabia* they bear ripe fruit twice or thrice in a year. The use of coffee is now well known every where, and the liquor made with it is generally supposed to be good in weaknesses of the stomach, in want of appetite, and in the flatulent cholic. It prevents sleepiness, and is good in sleepy diseases, for which reason it refreshes the brain and the animal spirits. It is good for those that are fat, and abound with thick gross humours; but with those that are lean, and have hot constitutions, it does not so well agree, nor yet with those of melancholy dispositions.

NUX MOSCHATA, or **NUX MYRISTICA**, the *Nutmeg*, is very firm and compact, and yet is very easily pounded in a mortar. It is wrinkled without, and somewhat of an ash colour; but within it is variegated with a whitish yellow, and a bay colour, running in veins without any regularity. The trees that bear nutmegs are now entirely in the possession of the *Dutch*, as are all the spice islands; they are like pear trees, and have an ash coloured bark, with a spongy wood. The flowers, or blossoms, are yellowish, with five leaves, not unlike those of cherries; to these succeed the fruit, hanging to a long pedicle. It is somewhat like a walnut, and the kernel, or nutmeg, is covered with three coats, the first of which is fleshy, soft, and juicy, about as thick as a man's finger, but villous and red, and variegated with yellow, gold colour, and purple spots, like a peach. When it is ripe it gapes spontaneously, and is of an austere taste. Under this there is another reticular covering, or rather divided into several parts, which is of an oily clammy consistence, and as it were cartilaginous, but thin, of an agreeable aromatic smell, and of an acrid aromatic taste, with a sort of bitterness. It is of a saffron colour, and is what we call **MACÉ**. Between the clefts of this there is a third covering, which is a hard, woody,

woody, thin shell, of a dusky reddish colour, and brittle; and in this the nutmeg is contained. It is soft at first, but grows dry and hard in time. The taste and smell is too well known to need a description. The principal use of nutmegs is as a spice, and they are good to promote digestion, to stop vomiting, to disperse wind, and to ease pains of the cholic. However, the immoderate use is bad, for it will affect the head, and produce sleepy diseases, as they have found by experience in the *East-Indies*. When toasted they have a binding quality, and are good in fluxes of the belly, and are given to the quantity of a dram.

NUX VOMICA, *the Vomit nut*, is round, flat, depressed, about an inch broad, and a quarter of an inch thick; it is of a hard horny substance, of an ash colour, and a little downy without, with a navel on the middle of each side; but one side is flatter than the other, and the taste is bitter; it is brought from the *East-Indies* with snake-wood. It is of no use in medicine.

CARTHAMUS, *Bastard Saffron*, produces seeds that are sometimes used in medicine, but the flowers very seldom, for they are chiefly used as a dye. It agrees with thistles in most of its characters, only the seeds are always without down. It is greatly cultivated in *Germany*, and is brought into *England* from thence, for the use of the dyers. It is sown in the open fields in the spring of the year, and when come up they hoe it out thin, as we do turnips, leaving the plants about eight or ten inches distant every way. These plants divide into a great many branches, each of which bears a flower at the top of the shoot, which when fully blown they pull off, and is the part the dyers make use of.

SANTONICUM SEMEN, *Worm seed*, is a gross powder, consisting of oblong, scaly, yellowish, green grains, of a disagreeable bitter taste, with somewhat of an aromatic acrimony; the smell is a little aromatic, but nauseous, and there seem to be diminutive leaves and exceeding small streaked stalks among it. Its chief virtue is against worms, besides which it is said to strengthen the stomach, disperse wind, and excite an appetite; the dose is from a scruple to a dram.

ANISUM

ANISUM INDICUM STELLATUM is a fruit in the form of a star, which consists of six, seven, or more capsulae, meeting like rays in the center; it is of a triangular shape, and from near half an inch to an inch in length, and from a quarter to near half an inch broad. It is a little flat and united at the base, being composed of a double rind, the outermost of which is hard, rough, wrinkled, and of a bay or rusty colour; but the inside is hard, smooth, and shining, and has two valves, which gape on the upper part in those that are dry and old. There is in every one a kernel, which is smooth, shining, oblong, flat, and near a quarter of an inch long, and a twelfth broad, of the colour of linseed, which in a slender brittle shell contains a whitish, fat, sweet flesh, or pulp, agreeable to the palate, and of a taste between aniseed and fennel-seed, but stronger. The capsula has the taste of fennel mixed with somewhat of an acidity, and the smell is like it, but more fragrant. It is brought from *China*, *Tartary*, and the *Philippine* islands, and has the same virtues as aniseeds and fennel-seeds, but stronger. They strengthen the stomach, discuss wind, and promote urine.

CHAP. VI.

Of liquid Resins.

THE fluids that flow spontaneously from any plant or tree, or from the wounded bark, either concreate into a resin, or gum, or are somewhat of a middle nature between a gum and a resin, which ought carefully to be distinguished from each other.

A resin is a fat, oleaginous, inflammable substance, that will not dissolve in water, but will in oil or spirit of wine. It is of two sorts, for one is clammy, liquid, and tenacious; and the other dry and brittle, which however will grow soft with heat.

A gum is a concreted juice that readily dissolves in water, but will neither melt nor take fire. A gum-resin is that which will dissolve equally in water or oil, or at

least

least for the greatest part, and is composed of resinous and gummous particles.

OPOBALSAMUM, *Balm of Gilead*, is a liquid resin, of a very light yellowish colour, and of a fragrant smell, not unlike that of citrons, but the taste is acrid and aromatic. Authors have long disputed where this balsam is produced; but it is certain, that it is now only to be met with in *Arabia Felix*, and has different virtues according to its age, for when fresh it has a much greater efficacy than when old. It is given inwardly against putrefaction of the viscera, and abscesses of the lungs, liver, and kidneys. The dose is from two scruples to a dram. It also cleanses foul ulcers, and heals them in a short time; but it is hard to be met with genuine, and very little that is so is brought over to us.

BALSAMUM PERUVIANUM, of which there are two or three sorts, as the *Balsamum Peruvianum album*, the *white Balsam of Peru*, that is fluid, and thinner than turpentine, but of a clammy consistence, and is resinous, inflammable, limpid, and of a yellowish white colour. The taste is a little acrid and bitterish, but the smell is sweet and fragrant, approaching to that of storax. It is brought from *Spanish America*.

BALSAMUM PERUVIANUM FUSCUM, *brown Balsam of Peru*, is fluid, resinous, clammy, and nearly of the consistence of turpentine; the colour is brown or of a reddish black, with a most fragrant smell like that of benjamin; but the taste is subacid, and a little pungent on the tongue. It will readily take fire and flame, the smoke of which smells extremely agreeable. That which is quite black is bad. They both are the juice of the same tree, and the one proceeds from the wounded bark of the tree; but the other is obtained by boiling. They cut the wood, bark, and branches, into very small bits, and then boil them in water for a considerable time; when the water is cold, the balsam will swim on the top, which they put in shells, and keep for use. The dose is from four drops to twelve in an asthma, consumption of the lungs, and fits of the gravel. Outwardly, they ease pains proceeding from cold humours, and are excellent in healing wounds.

BALSA-





Liquid Amber.

BALSAMUM TOLUTATUM, *Balsam of Tolu*, is a resinous clammy juice, of a middle consistence between a fluid and a solid; the colour is bay, inclining to that of gold; it has a most fragrant smell, and the taste is sweet and agreeable, for it does not create a nausea like other balsams. It is brought in small gourd shells from *South America*, and particularly from *Tolu*. In length of time it becomes dry, hard, and brittle. It has the same virtues as balsam of *Pera*, and is of great use in consumptions of the lungs, and internal ulcers. It is very efficacious in curing wounds, and serves to make what is called the ladies blacklicking plaster, now so much in vogue.

BALSAMUM COPAIBA, *Balsam of Copivi*, is a resinous liquid juice, and while fresh is of the consistence of oil, but in time it grows thick and glutinous. It is of a yellowish white colour, with an acrid, bitter, aromatic taste, and of a fragrant smell. It is brought by the *Portuguese* from *Brasil* into *Europe*. It is often adulterated with turpentine, but may readily be known from it when taken; for it does not give the violet smell to urine as that does. It abates the acrimony of the humours, enriches poor blood, and it both inwardly and outwardly heals all manner of wounds. It is also good in disorders of the lungs, and is excellent in appeasing coughs. It is given in a bolus with sugar and powder of liquorice, from five to twenty drops.

LIQUIDUM AMBARUM, *Liquid Amber*, is a resinous liquid, fat juice, of the consistence of turpentine, and of a yellowish red colour; it is of an acrid aromatic taste, with a fragrant smell, not unlike storax. It is brought from *New Spain*, *Virginia*, and other parts of *America*. It was formerly of great use among perfumers, but is now laid aside, and is seldom met with in the shops.

STYRAX LIQUIDUS, *Liquid Storax*, is a resinous juice, of which there are two sorts in the shops, the one pure, and the other impure or thick. The best is of the consistence of turpentine, and semi-transparent; the colour is brown, or of a reddish brown, and sometimes of an ash coloured brown, with a strong smell like storax; but it being so violent it is disagreeable, and

the taste is a little acrid, aromatic, and oleous. The impure storax is a resinous juice, full of dregs, and of a brownish or ash colour; it is also opaque, fat, and has not so strong a smell. It is the produce of a particular tree, growing near *Suez* in *Arabia*, whose bark they strip off every year and boil in sea-water to the consistence of bird-lime, and then they take off the resinous substance swimming at the top. It is in like esteem among the eastern people; it is said to have the same virtues as the former balsams, and is given from three drops to twelve to heal internal ulcers; but it is more commonly used outwardly for wounds, bruises, and ulcers.

TEREBENTHINA, *Turpentine*, is of several kinds, and there are four kept in the shops.

TEREBENTHINA CHIA VEL CYPRIA, *Chio Turpentine*, is a resinous liquid juice, of a whitish yellow colour, inclining a little to blue; it is sometimes transparent, and sometimes of a pretty firm consistence, and sometimes soft, thick, and glutinous. The taste is a little bitterish and acrid, and the smell is also acrid but not disagreeable. The best is brought from the islands of *Chio* and *Cyprus*. The use of this, as well as of the other turpentines, is both external and internal; externally it is emollient, discutient, resolvent, cleanses ulcers, and heals recent wounds. But it is generally prescribed inwardly, and is remarkable for healing ulcers of the stomach, intestines, liver, kidneys, and bladder. It is good in an old cough, for purulent spitting, and the beginning of a consumption. It promotes urine, gives it a violet smell, and is good in heat of urine. The common dose is from half a dram to a dram and a half, in the form of a bolus, or dissolved in the yolk of an egg.

TEREBENTHINA VENETA, *Venice Turpentine*, is a resinous, liquid, limpid, clammy substance, thicker than oil, but more liquid than honey; it is a little transparent like glass, and of a yellowish colour; the smell is resinous, fragrant, and acrid, but not disagreeable; the taste is acrid and bitterish. It is called *Venice turpentine*, because it was formerly brought from *Venice*; but now from *Savoy*, and the southern parts of *France*.

TERE-

TEREBENTHINA ARGENTORATENSIS, *Strasbourg Turpentine*, while fresh is more liquid than the former, and is more transparent, not so clammy, and has a finer smell, something resembling that of citrons; but the taste is more bitter, pretty much resembling that of citron peel; in time it grows yellowish and thick. It flows from the tree called *abies taxifolio*, that is, the fir with the leaf of the yew-tree; not only from its trunk and boughs, but also from certain tubercles within the bark. That which proceeds from the trunk is the worst, and when dry it resembles frankincense in colour and smell, but that which proceeds from the incision of the tubercles is best. It has the same virtues as *Venice turpentine*, tho' some think it is more efficacious, and it is given in the same manner.

TEREBENTHINA COMMUNIS, *common Turpentine*, is more thick and tenacious than any of the former, and is not so transparent; it has a resinous strong smell, with an acrid, bitterish, nauseous taste. It proceeds from the pine-tree, either spontaneously or from incisions. The white resin, called by the *French* *galipot*, is commonly mixed with wax for the making of *flambeaux*. When the white resin is melted with common turpentine, and oil of turpentine, the composition is called *Burgundy pitch*. In some places, the trunks of the old pine-trees that are still standing, have a ditch made round them and set on fire, which forces out a fluid well known by the name of tar, of which tar-water is made, lately so much in vogue, for the curing almost all sorts of distempers. All sorts of resins being set on fire, produce soot, which preserved, is known by the name of lamp-black. All sorts of resins, as well liquid as solid, are emollient, digestive, resolvent, and serve to make plasters and ointments for the curing of wounds and ulcers.

C H A P. VII.

Of Solid Resins.

ANIME *vel* ANIMUM, *Gum Anime*, is improperly called a gum, for it is nothing but a resin, and is either oriental, or occidental. It is a transparent resin, and is brought in fragments of various colours, for some are white, others reddish, and others brown. When kindled, it has a pleasant smell, and is brought from *Arabia* to us. We know nothing of the tree that it proceeds from, nor are we certain that this is its proper name.

AMINE OCCIDENTALIS SEU AMERICANA, *American Anime*, is a white resin, a little inclining to the colour of frankincense. It is more transparent than *copal*, but more oleaginous. It is of a most grateful and sweet smell, and when thrown upon live coals soon burns away. It is brought from *New Spain*, *Brazil*, and the *American* islands. Some apply this outwardly, when dissolved in oil or spirits of wine, to strengthen the nerves.

BENZOINUM, *Benjamin*, is a dry, hard, brittle, inflammable resin, consisting of various bits, some of which are yellowish, others whitish, in the same mass; it has a resinous taste, with a sweet fragrant smell, especially when it is set on fire. There are two sorts, one of which is pale, or of a reddish yellow, containing white grains like almonds; the other is blackish, with few or no spots. It is brought from the kingdom of *Siam*, and the islands of *Java* and *Sumatra*; that of the lightest colour is best. Its principal use is as a perfume, though it is good in disorders of the breast, promotes expectoration, and appeases coughs. The flowers of *Benjamin* promote sweat, and are good in the asthma. The resin is used externally to strengthen the head, stomach, and nervous parts, when made up into a plaster; the tincture is of great use in taking off tubercles and redness of the face.

CAMPHORA, *Camphire*, is a resinous fattish substance, white, light, and transparent, and is brought to us in a sort of loaves or masses, six inches long and one



The Camphire Tree!



or two thick; it has an acrid, bitterish, aromatic taste, and yet with a sense of coldness; the smell is fragrant, somewhat like rosemary, but much stronger. It is so volatile, that when exposed to the air it will diminish by degrees, and at length fly quite away. It easily takes fire, leaving no earth, or any thing else behind it, when it has done flaming. It is brought from *Japan* into *Holland*, and from thence dispersed all over *Europe*. In the *East-Indies* it is distinguished into two sorts, namely, that which is brought from *Japan* or *China*, and that which is produced in the islands of *Borneo* and *Sumatra*; but this is very dear and uncommon, and is seldom or never brought to us. It is produced from a tree like a laurel, but of a very large size, for it grows to the bigness of an oak-tree. Camphire may be got from any part of it, for it flows thro' incisions like other resins, but in some places the country people cut the root and wood into small bits, pouring water upon them, and boiling them in an iron vessel, with a head fixed thereto made of straw, to which when it is sublimed it sticks like foot. However, it is coarse when first brought over to *Europe*, and is cleansed by the *Dutch*. The virtues of camphire are very great, especially in the hands of a skilful physician; for it is an alexipharmic, and is both anodyne and diaphoretic, without heating the body or disturbing the circulation of the blood; neither does it occasion thirst, nor render the urine of a higher colour, as hot medicines will. It has also an anodyne and soporiferous quality, and is good in pains, madness, and spasms, often producing wonders. The dose is from three grains to a scruple, given in the form of a bolus, or dissolved in oil of sweet almonds. It is used externally, when dissolved in spirits of wine in rheumatic pains and inflammations; it is also good against burns and scalds.

CARANNA, *Caranna*, is a resinous substance, as ductile as pitch when it is fresh, but when old it is hard and brittle, of a blackish ash colour without, and brown within; it has a resinous bitterish taste, somewhat like myrrh, and when kindled has a fragrant smell. It is brought from *America* in masses wrapped up in a sort of

of leaves. It is only of outward use, and is said to resolve tumours, ease pains, and strengthen the nerves. It is made into a plaster and laid to the temples for the tooth-ach, and on the top of the head for the head-ach.

ELEMI, *Gum Elemi*, is a yellowish resin, or of a greenish white, pretty hard on the outside, but within soft and clammy, and is brought to us in masses of a cylindrick form; when set on fire it has a strong but not disagreeable smell, somewhat like fennel. This is the *true elemi* that was brought from *Ethiopia*, and is now seldom to be met with in the shops.

ELEMI AMERICANUM, *American Elemi*, is sometimes whitish, sometimes yellowish, and sometimes greenish. It is somewhat transparent like resin, and has a strong smell like that; this is very common in the shops, and is only used outwardly for resolving tumours, dissolving ulcers, and easing pains. It is particularly recommended against diseases of the head and tendons, especially the ointment prepared with it, which is called the balsam of *Arcaus*.

RESINA HEDERÆ, the gum of the ivy-tree, is a resinous, dry, hard, compact, brown or rusty coloured substance, somewhat transparent; it is broken into small fragments, among which some are of a reddish colour; the taste is subacid, a little astringent and aromatic, but it has no smell. It is brought from *Persia*, and other oriental countries.

LADANUM *vel* **LABDANUM**, *Labdanum*, is a resinous substance, of which two kinds are met with in the shops, one of which is brought in large compact masses, and is of an agreeable smell; with a reddish black colour. It is wrapped up in bladders or skins; but the other sort is without any, and is of a contorted shape, somewhat like a screw, and is dry and brittle; but when heated by the fire is a little soft, and is mixed with a kind of black sand. It is of a black colour, and weaker than the former, but is most commonly met with amongst us. Outwardly, labdanum is emollient, and is used to strengthen the stomach and promote digestion; but it is very seldom used.

MASTICHE,

MASTICHE, *Mastich*, is a dry resin, of a pale yellowish colour and transparent; it is brought in tears of the size of small peas, and is brittle at first between the teeth, but when warm it sticks thereto; and when thrown upon live coals it takes fire, emits a pretty good smell, and the taste is slightly aromatic, resinous, and subastringent. That is best that is pale, yellowish, transparent, dry, brittle, and has a pretty strong smell; but the black, green, livid, or impure, is good for nothing. Some physicians have commended mastich for strengthening the fibres of the viscera, and abating the acrimony of the humours. Some give from a scruple to half a dram, in spitting of blood and inveterate coughs. Externally laid to the temples, it is said to cure the tooth-ach.

OLIBANUM, *Olibanum*, is of a resinous substance, of a pale yellowish colour, and transparent, it is brought in tears like mastich, but bigger, and is of a bitterish taste, and pretty acrid, but not disagreeable, and of a fragrant smell. It readily takes fire, and flames a long while. That is best that is whitish, transparent, pure, shining, and dry. Some have accounted it a specific against a pleurisy, and commend it in disorders of the head and breast, especially coughs and spitting of blood. The dose is from a scruple to two drams. A dram of it, put into an apple, roasted under the ashes, and given to the patient, has been observed to cure those who have been given over in a pleurisy; but then they must be well covered in bed in order to sweat. If the first dose does not succeed, another must be given in six hours time. It is accounted a good vulnerary, and therefore is mixed in various plasters.

SANDARACHA, *Gum Sandarach*, is a dry, inflammable, transparent, resinous substance, of a pale yellow colour, and brought in tears like mastich. The taste is resinous, but the smell when it is kindled is fragrant and sweet. That is best that is yellowish, transparent, and shining. It is brought from the coast of *Africa*, and has much the same virtues as mastich, but is seldom given inwardly; nor is it very often applied outwardly. When powdered it is well known by the name of pounce, which is rubbed over paper to prevent the

the sinking in of the ink, and to render the writing more fair; it is also an ingredient in some sorts of varnish.

SANGUIS DRACONIS, *Dragon's-blood*, is a dry, brittle, resinous substance, melting easily, and as readily taking fire. It is of a dark red, but when powdered is of an elegant crimson; when drawn into thin plates it is transparent, but is without taste or smell, unless when kindled; for then the fumes smell somewhat like storax. There are two sorts in the shops, one of which is hard and in masses, about an inch long, and half an inch thick, and is wrapped up in long narrow leaves. *Dragoons-blood* in tears and drops is generally mixed with bark, wood, earth, or other heterogeneous substances, and then made into masses, or leaves, as some call them. There is another counterfeit sort, that may be readily distinguished from the true, for the masses are of a dusky red colour, and made up of several sorts of gums tinged with *Brasil* wood. It will not flame, but when placed over the fire rises in bubbles, and being put into water dissolves therein. That is best that is shining, of a darkish red, wrapped up in leaves, and when powdered is of a fine red shining colour. It is brought from the *East-Indies*, and is produced by four different trees; however, that which is genuine will dissolve only in spirits of wine and in oils. It is of an astringent quality, and is excellent in all sorts of hæmorrhages whatever; the dose is from half a dram to a dram, and when applied outwardly dries up ulcers, heals wounds, and fastens loose teeth; it is also of use to painters, in making a red sort of varnish.

STYRAX SOLIDUS, *Storax*, is a resinous substance, of which there are two kinds, *Storax Calamite*, and *Common Storax*.

STYRAX CALAMITA, *Storax Calamite*, is a resinous, shining, solid, somewhat fattish substance, which is composed of reddish and whitish grumes or grains, of a resinous, acrid, but not disagreeable taste, and a most fragrant smell, especially when thrown on live coals; it takes fire readily, and emits a very bright flame.

STYRAX



*The Dragon
Tree growing
at Chelsea.*

Printed by



STYRAX VULGARIS, *Common Storax*, is of a yellowish red, or brownish colour, which is shining, fat, and a little clammy, and is brought in masses mixed with whitish grains; it has the same smell and taste as the former. There is also another sort of storax which is mixed with saw-dust, and this is now commonly sold in the shops, and is oftener met with than the true. It is good in diseases of the breast, and is said to strengthen the brain, refresh the spirits, and restrain their inordinate motions; it has also an anodyne faculty, and is good in pains of the head, and inveterate coughs, by abating the acrimony of the humours. The dose is from half a scruple to half a dram.

TACAMAHACA, *Tacamahac*, is a resinous, dry, fragrant substance, of which there are two kinds in the shops, but that in shells is the best. It is a little soft, sometimes pale, sometimes yellowish, and at other times greenish. It is brought in shells, which seem to be of the gourd kind, and covered with leaves. It has a most fragrant aromatic and very sweet smell; but it is seldom met with in the shops. The common sort consists of whitish grains, or globes, but they are sometimes yellowish, reddish, greenish, or variegated with all those colours, and semi-transparent. The smell is much like the former, but not so disagreeable, and it is brought from *New Spain*. It is seldom or never given inwardly, but is applied outwardly for easing of pains arising from cold flatulent humours; it resolves and ripens swellings, and restrains defluxions on the eyes and other parts of the face. When laid to the temples it is much praised by some for curing the tooth-ach, and on being applied to the stomach it strengthens it, and assists digestion.



CH A P. VIII.

Of Gums.

GUMMI ARABICUM, *Gum Arabic*, is brought over to us in tears, or drops, of different colours, some

some of which are pale, others yellow, and others red, with a wrinkled surface, and brittle, and which shines like glass when broken. When held in the mouth it sticks to the teeth, and dissolves readily in water, but has no taste. It is produced by a tree called the *Atalia Vera*, or the *Egyptian Thorn*, and is brought over from *Arabia*, *Egypt*, and other parts of *Africa*. The best is whitish, or of a palish yellow, shining, dry, transparent, and free from filth. When it is brought over in large reddish dirty masses, it is only fit for mechanical uses. It will not dissolve in spirits of wine or oil, and in the fire it burns to ashes without flaming, whence it appears to consist of a mucilage and earth; whence it is good in hoarsenesses, coughs, salt catarrhs, spitting of blood, the strangury, and heat of urine. The dose is from a scruple to two drams. When a powder of this gum is wanted, it must be beaten in a red hot mortar, and then the powder of it may be exhibited for internal use.

GUMMI SENECA, vel SENICA, Gum Seneca, is not unlike gum arabick, and is called Senega, because it is brought from a province of *Negroeland* bordering upon the river *Senegal*. We now have it in great plenty, and at present the whole trade is in our own hands, but from what tree it is obtained we are uncertain, tho' perhaps it may be a kind of an acacia. The white and smaller tears of this gum are often sold for the true gum arabick; and there is no great cheat in the matter; for their qualities and properties are much the same.

TRAGACANTHA, TRAGACANTHUM, and DRAGACANTHUM, Gum Tragacanth, is a gummy juice, sometimes brought over in long strings variously contorted and bent, and sometimes in small grumes, or bits; it is white, semi-transparent, and sometimes yellowish, reddish or blackish. It is dry, but not very hard, and without either smell or taste. It is brought from *Cyprus*, *Asia*, and *Greece*. That in strings like worms or isinglass is best, when it is white and free from filth. It serves for the same purposes as gum arabick; and it is observable that a dram of it will thicken a pint of water, full as much as an ounce of gum arabick,

bick, it being altogether a mucilage without any earthy parts. It is good in dry sharp coughs, hoarsenesses, and other disorders of the breast, arising from an acrid lymph; as also in the stranguary, and ulcers of the kidneys; it is also of use to abate the heat of the mouth and tongue, and to heal the painful chaps of the nipples. It is best taken dissolved in some convenient water, and the dose is from half a scruple to two drams. It is never used externally, but serves the apothecaries for making troches.

MANNA, *Manna*, is a sort of gum, which flows spontaneously from several sorts of trees, and afterwards congeals into grumes in the form of an essential oleous salt; it not only proceeds from the ash and quicken-tree, but also from the larix, pine, fir, oak, juniper, maple, olive, fig-tree, and other plants; for which reason it differs in form and consistence, according to the place and tree from whence it was gathered; for some is liquid, and of the consistence of honey, and another sort is concreted into grains like mastich, and another again into grumes or small masses. *Manna* is also divided into the *Oriental* and *European*, the first of which is brought from *India*, *Persia*, and *Arabia*.

MANNA CALABRA, *Calabrian Manna*, is sometimes in grains, sometimes in tears, and sometimes in grumes or small masses; it is brittle and whitish while fresh, and somewhat transparent; but in time grows reddish, and in moist weather turns to the consistence of honey; it is as sweet as sugar, with a kind of an acidity. That is best which is white or yellowish, light and concreted into grains or grumes in the shape of icicles; but that which is fat, like honey, or blackish and dirty, is not good; for sometimes this is counterfeited with coarse sugar, honey, and a little scammony; likewise that which is white, opaque, solid, heavy, and not in the shape of icicles, is bad, because it is nothing but sugar and manna boiled together. This counterfeit sort may easily be distinguished from the true by its density, weight, opacity, and taste. This manna in *Calabria* and *Sicily* flows spontaneously from two sorts of ash trees, and is found on the boughs and leaves in the summer months, unless prevented by rain.

rain. When the weather is dry, it flows from the trunk and large boughs of these trees, from the twentieth of *June* to the end of *July*, and from noon till evening, in the form of a limpid fluid, which concretes into various grumes, and grows white and dry. They gather it the next day, scraping it off with wooden knives, if the weather is fair; but if it should chance to rain the manna is lost. When *July* is past, they make incisions in the bark of the ash and quicken-trees, and from noon till evening a liquid flows out, which concretes into thicker grumes, which are sometimes very large, and require a day or two to bring it to a proper consistence; this is redder than the former, and is sometimes blackish, on account of the earth and other filth mixed therewith.

MANNA DI FRONDE flows spontaneously in *July* and *August*, from about the nervous fibres of the leaves, which being dried in the air concrete into whitish grains of the size of wheat; insomuch that in *August* the greater leaves of the ash tree look white, as if they were covered with snow; however, this is very scarce, on account of the difficulty of gathering it. The virtue of manna is well known, it being a mild laxative purge, and is thought to dissolve gross humours, and to abate their acrimony; whence it is good in catarrhs and coughs, proceeding from an acrid phlegm. It is also good in disorders of the breast and lungs, when stuffed with clammy humours. It is also useful in the pleurisy, inflammation of the lungs, and tension of the belly from a thick hot bile. The dose is from one ounce to three, and *Hoffman*, in some particular cases, has given to four.



CHAP. IX.

Of Gum-resins.

AMMONIACUM, *Gum Ammoniac*, is a concentered juice, of a middle nature between a gum and a resin; it is composed of little lumps, or masses, shining here and there with bits that are milk white, or reddish;

dish; but the substance itself is a little brownish, and not unlike benjamin; but it is sometimes in tears. It is sometimes yellowish on the outside, and of a yellowish white within; the taste is sweetish at first, but afterwards bitterish, and the smell is fragrant, not unlike that of galbanum, but stronger. When chewed it grows whiter and whiter by degrees, and when thrown upon burning coals it will flame; it will dissolve in vinegar or hot water, and is brought from *Alexandria in Egypt*. The tears are best for internal use, especially when pure, dry, and without mixture. Ammoniac incides gross humours, and is good in the asthma, in crude tubercles of the lungs, and is in general a great aperient. The dose is from half a scruple to a dram, in the form of an emulsion, electuary, bolus, or pills. Outwardly it is discutient, and is of great use in ripening tumours.

ASSA-FOETIDA is a kind of gum-resin, and is of the consistence of wax; it is frequently brought in large masses, full of shining, whitish, yellowish, reddish, flesh-coloured or violet spots. It has a very strong smell, somewhat like garlick, and has a bitter, biting, acrid taste. It is brought from *Persia* and the *East-Indies*, and that is best which has the strongest smell, and seems to be composed of tears-reduced into masses. It proceeds from the wounded root of a tree, but never from any other part, and at first it is as fluid as cream, and of the same colour; but being exposed to the air and sun it becomes brownish and thick. It is prescribed in the flatulent cholic, hysterical disorders, and for promoting secretions. It is diaphoretic, and promotes sweat; it is good in disorders of the nerves, and is of some use in a palsy. The dose is from twelve grains to a dram, and even to two drams.

BDELLIUM, *Bdellium*, is a gum-resin, which is brought to us in masses of several shapes and sizes, and has somewhat of the appearance of myrrh, it being of a rusty reddish colour; but in the inside it is a little transparent. It is brittle, of a bitterish taste, and has no disagreeable smell when kindled; it will flame for a considerable time, with a sort of a crackling noise.

It is brought from *Arabia* and *India*.

It is a good emollient, and is effectual in dispersing tumours of the glands.

EUPHORBIIUM, *Euphorbium*, is a resinous gum, and is brought to us in drops, or tears, of a pale yellowish, or gold colour; are bright, and of different shapes and sizes, with a most acrid, burning, nauseous taste; but without smell. It is brought from the inland parts of *Africa* to *Sallee*, from whence it is transported into *Europe*. It is a most violent and dangerous purge, and often produces fainting and cold sweats; for which reason various methods have been used to correct it, which are not worth mentioning, because in whatever manner it is given it is never safe.

GALBANUM, *Galbanum*, is a fat substance, as ductile as wax, and is shining and semi-transparent, it being of a middle nature between a gum and a resin. It is of a whitish colour while fresh, but afterwards grows yellowish or reddish. It has a bitter acrid taste, with a strong smell. That is best which is fresh, fat, pure, and moderately viscous. When taken inwardly its virtues are not unlike gum ammoniac, but weaker; however, it dissolves thick phlegm, for which reason it is good in an asthma, and old cough; it discusses wind, is good in the cholic, and opens obstructions of the womb. Externally, it softens and ripens swellings, for which reason it is mixed in various plasters; being applied to the navel, it mitigates hysteric disorders, and spasmodic motions of the intestines. The dose is from one scruple to two.

MYRRHA, *Myrrh*, is a gum-resin, brought to us in grains or masses of various sizes, some of which are as big as a hazle-nut, and some as large as a walnut; the colour is yellow, or rather of a rusty red, and semi-transparent. The taste is bitter, subacid, and aromatic, but nauseous, with a strong smell, which strikes the nose when it is pounded or burnt. The best is brittle, light, of the same colour, bitter, acrid, and of a pretty strong smell. It strengthens the stomach, helps digestion, discusses wind, and is good in all cold cachectic diseases, catarrhs, and all sorts of ulcers. It is given in substance in the form of a bolus or pills, from half a scruple to half a dram. Externally it attenuates, discusses,

discusses, and is an excellent vulnerary; it cleanses old ulcers, preserves them from putrefaction, and cures the caries of the bones. It is bad in all sorts of hamorrhages, as well as in spitting of blood, and ought not to be given to women with child, except with great caution. The tincture of myrrh is most in use, and is given from five drops to half a dram. When outwardly applied, it often prevents gangrenes and mortifications; and that, which is improperly called the oil of myrrh, is good against freckles and pimples on the face.

OPOPANAX, *Opopanax*, is a gummy and resinous juice, concreted into grains about the size of a pea, which are reddish without, and within of a whitish yellow; the taste is intensely bitter and acrid, and the smell is strong. The best is in shining, fat, brittle tears, of a saffron colour without, and whitish or yellowish within; it is brought from the *East-Indies*, but we know not from what plant. It takes fire like resin, and dissolves in water, where it turns it of a milky colour. It incides gross viscid humours, discusses wind, and loosens the belly; it is good in hypocondriacal disorders, obstructions of the viscera, and is an ingredient in the gummous pills of the shops. The dose is from a scruple to a dram.

SAGAPENUM, *Sagapenum*, is a juice between a gum and a resin, and is sometimes brought in grains, but more frequently in larger masses, which are reddish on the outside, and within are of the colour of horn; it has a biting acrid taste, with a strong smell, and seems to be of a middle nature between *assa-foetida* and *galbanum*. It will flame when held to a candle, and will dissolve entirely in wine vinegar and hot water. That is best which is transparent, reddish without, and within full of whitish or yellowish specks, and which grows soft when handled. It is good in disorders of the breast, arising from a gross phlegm; as also in hard callous swellings, especially of the nervous parts. The dose is from a scruple to half a dram.

SARCOCOLLA, *Sarcocolla*, is a gummous juice, and somewhat resinous; it consists of small whitish grains, or of a whitish red, that are spongy, brittle,

and now and then mixed with shining specks; the taste is subacid and bitter, with a disagreeable nauseous sweetness. It softens between the teeth, and when held to a candle it first bubbles, but afterwards breaks out into a clear flame, and yet it dissolves in water. It is brought from *Persia* and *Arabia*.



C H A P. X.

Of Juices extracted by Art from Plants.

ALOE, *vel* SUCCUS ALOES, *Aloes*, is of three sorts, the *Succotrine*, the *Hepatic*, and the *Caballine*. The first is brought from the island of *Socotora*, near *Arabia*, and is the best and purest of them all; it is of a reddish or saffron colour, and when broken is shining, and as it were transparent; the taste is bitter, astringent, and somewhat aromatic, with a strong, but not disagreeable smell. The *Hepatic* is dense, dry, opaque, and of the colour of liver, with a strong smell and taste. *Caballine*, or *Horse Aloes*, is the worst of all, and is heavy, dense, black, and full of sand; it has an exceeding bitter nauseous taste, and a very strong disagreeable smell. The best *Succotrine Aloes* is shining, transparent, fat, and brittle in the winter, but in the summer a little softer, and is of a yellowish or purple reddish colour, but when powdered is of a shining gold colour, with an aromatic bitter taste, and a strong aromatic smell, almost like myrrh. *Succotrine Aloes* is the best for internal uses, and the *Hepatic* for external, but the *Caballine* is only for horses. *Aloes* in general is not only a purge, but is a remedy against disorders of the bile; but if it be given in too large a dose, or too often, it is apt to create hæmorrhages, and particularly the piles. *Aloes* has this peculiar property, that a few grains of it will loosen the body as much as a scruple. Some give it from one scruple to two scruples in substance; but the most common way of taking of it is in *tinctura sacra*.

SCAMMONIUM, *Scammony*, is a concrete resinous and gumous juice, and is a noted purge. There are



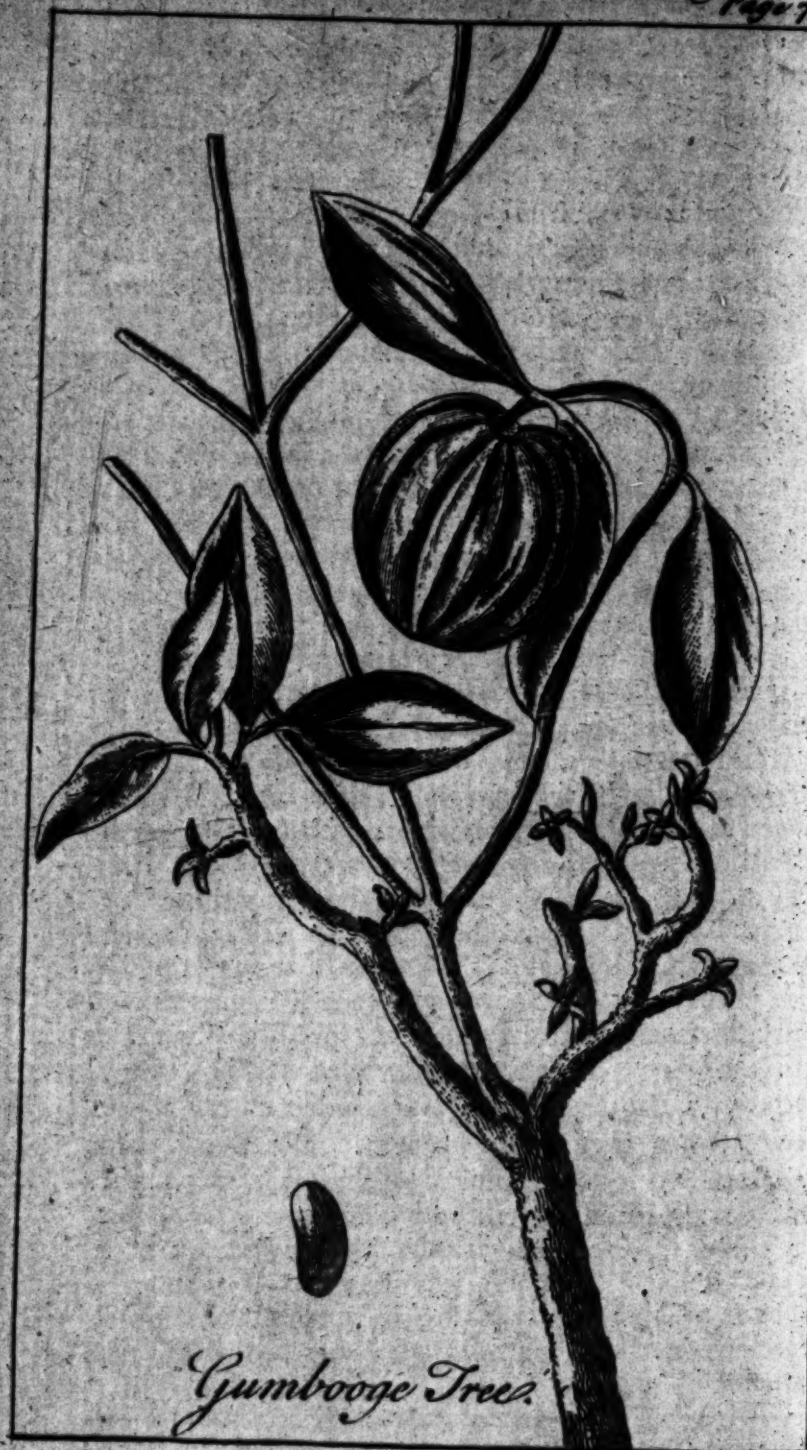
Succotrine

Aloes

Realis







Gumbooge Trees.

are two sorts, one of which is brought from *Aleppo*, and the other from *Smyrna*; the first is light, spongy, brittle, and of a blackish ash colour, shining when broken; when it is pounded it turns to a whitish or ash coloured powder; it has a bitterish acrimonious taste, and a very strong smell. *Smyrna Scammony* is more dense and heavy, and of a black colour. However, that Scammony is best, which will readily break and powder, and bites, or burns the tongue very little, but when mixed with spittle turns whitish like milk. The black, heavy, and impure is bad. All strong purges are in some sense or other dangerous, and this in particular is not without its bad effects; for sometimes it purges too violently, and at other times not at all; it is sometimes attended with sickness, and produces wind, as well as occasions thirst and a fever. Therefore the best way is to grind it with sugar, so as to divide its resinous particles, and then it may be given safely to ten or twelve grains.

GUMMI GUTTA, *Gumboge*, is a concreted juice, partly of a resinous, and partly of a gummous nature; it is inflammable, dense, dry, hard, shining, opaque, and of a yellowish saffron colour; it is brought over in pieces of various sizes, and has very little or no taste. It will dissolve both in wine and water, in which last it will turn a little milky, and yet tinge any thing with yellow. When held to the candle it will flame, and emit a copious smoke. It is reckoned among the violent purges, and brings away serous humours as well upwards as downwards, and that speedily, though it will not gripe. It is frequently used in the dropsy, cachexy, jaundice, catarrhs, and other chronic disorders. It has been given from two to fifteen grains, and from two to four grains it will not vomit, but from four to eight grains it will both vomit and purge without violence, especially if plenty of water gruel be drank after it. The best way is to give it either in a bolus or pills; however, it should be used with caution, especially because vomiting will not suit with some patients.

OPIUM, *Opium*, is a concreted resinous and gummous juice, which is heavy, dense, clammy, inflammable,

mable, and of a blackish colour. It has a strong soporiferous smell, with an acrid bitter taste, and is usually brought over in roundish cakes about an inch thick, and weighing from half a pound to a pound, which are wrapped up in poppy leaves. It is brought from *Natalia*, *Egypt*, and the *East-Indies*. Authors differ greatly about the effects of Opium; however, it is certain that in a proper dose it will generally procure sleep, and ease pain; I say generally, because it will keep some waking and prevent sleep; though at the same time it will ease their pains. Too large a dose, that is a few grains, will not only produce sleep, but blunt all the senses, hinder breathing, and prevent the patient from ever waking again. It is doubtless a most useful remedy, and will stop the process of many diseases; but then it is palliative only, and never cures any. It is exceeding hurtful to the weak, and should never be given where the motions of the patient are languid; likewise in some cholics it has often produced paralytic disorders; for which reason it should never be given to infants, and persons weakened with age. When exhibited in a proper dose it excites an agreeable sensation, and inclines to mirth like a moderate quantity of wine; for which reason the *Turks* always take large doses of it when they are going to engage in a battle. It stops all sensible evacuations for a time, except sweating, and enlarges the pulse. When too large a dose has been taken, it will be best to bleed and vomit, if the strength will permit; and then acids must be given, as vinegar, and the juice of lemons or spirits of vitriol properly diluted. Some cases will require strong sneezing powders, and blisters or sinapisms applied to the soles of the feet and nape of the neck, with painful frictions, scarifications, or burnings. The dose is generally a grain, but in some cases two may be given.

ACACIA VERA, *True Acacia*; is an inspissated gummous juice, brown or blackish without, and reddish or yellowish within; it is of a hard firm consistence, of an austere astringent taste, and is brought over in round masses, weighing from four to eight ounces. It is brought from *Egypt*. It is said to strengthen the stomach,

stomach, stop vomiting and loosenesses, as well as some sorts of hæmorrhages, by abating the acrimony of the humours, and strengthening the solid parts. The dose is from half a dram to a dram, in some convenient liquor.

CATECHU, improperly called *Japan earth*, is a gummy, resinous, inspissated juice, of a reddish black without, and a brownish red within, with an astringent bitterish taste, but no smell. There are two sorts, whereof one is better than the other, and melts more readily in the mouth. It is brought from the *East-Indies*, is a moderate astringent, strengthens the gums, and is good in small ulcers of the mouth, as also in coughs and hoarseness. It strengthens the stomach, helps digestion, and is good in loosenesses. The dose is from half a scruple to a dram.

SACCHARUM, *Sugar*, is of several sorts, which are so well known to every one that they need no description. Some are great enemies to sugar, and affirm it produces I know not what bad effects; but as those who have used it very freely have never received any damage from it, we may conclude it to be entirely harmless. Compositions of sugar are allowed on all hands to be good in disorders of the breast, and that, mixed with oil of sweet almonds, it is good in coughs, hoarsenesses, and the like. Externally sugar is a very great vulnerary, especially when mixed with a little brandy, for then it will heal wounds, cleanse ulcers, and prevent putrefaction.

TARTARUS, or **TARTARUM**, *Tartar*, is a saline hard substance, of an acrid and subaustere taste, which adheres to the bottoms and sides of wine vessels, from whence it is scraped off. It is of two sorts, the white and the red, both of which proceed from wines, of the same colours. The best Tartar is heavy, hard, with that part next to the wine rising into crystalline points, but when broken appears like sponge, or pumice stone, it being porous and mixed with earth, tho' it is a hard shining substance.

Tartar unprepared is seldom or never used internally; but is taken when purged, and then it is called
cream

cream or crystals of tartar; and is good to temperate the heat of the bile, and to quench thirst in burning fevers. It attenuates gross humours, opens obstructions of the viscera, and is good in cachectic and hypochondriac disorders. It is a laxative, and is often mixed with milder purges with success. When given from half a dram to two drams it is an aperient only, but from half an ounce to an ounce it is a purge. Cream of tartar will not dissolve in cold water, but it will in hot.

Salt of Tartar, which is procured by calcining tartar in an open fire, is a fixed alkali, and somewhat of a caustic quality. It serves for many chemical operations, and especially to extract the resinous and sulphureous parts of medicine in making of tinctures. When given alone, dissolved in a sufficient quantity of water, the dose is from twelve grains to half a dram; it will attenuate gross humours, and cure the heart-burn proceeding from acids in the stomach. Among the medicines that are usually procured from tartar, are soluble tartar, vitriolated tartar, and emetic tartar.



CHAP. XI.

Of Tubera, Fungi, and Substances that adhere to certain Vegetables.

TUBERA CERVINA, or BOLETUS CERVINUM, *Deers Balls*, is a tuberosc fungus, without a root, and is of a dusky yellow, with a hard, thick, and granulated rind; but the inside is of a purplish white. It is of the size of a walnut, though sometimes of that of a hazle nut, or less; and it is divided into cells that are soft and downy, in which are exceeding small seeds, lying together in a mass, and connected with filaments; when this substance has lost

its

its seeds, it is then contracted into a small round ball. The smell and taste when fresh are rank, but when dry and laid up for some time, they become almost insipid. They are of little use, for they are never eaten, nor have they any remarkable qualities to recommend them for physical purposes; whatever authors have said to the contrary.

**AURICULA JUDÆ, or FUNGUS SAMBU-
NUS,** *Jews-ear*, is a membranaceous fungus, in the shape of an ear, from whence it has its name. It is a spongy substance, growing at the bottom of old alder-trees, and is light, coriaceous, and membranaceous; it is ash coloured beneath, and blackish on the top, and the taste is earthly and flat, but it has no smell; it has little or no pedicle, but sticks close to the body of the tree. It is said to be astringent and drying, but is seldom or never taken inwardly.

AGARICUS, or FUNGUS LARICIS, *Agaric*, is a fungous substance, of a roundish, angular, unequal shape, and of different sizes, from the bigness of a man's fist to that of his head. It is very light, as white as snow, and may be readily rubbed into meal between the fingers; but it has a few fibres, and a callous ash coloured reddish rind, whose lower part is perforated by exceeding small seeds that lodge in the holes; the taste is at first sweetish, then bitter, acrid, and nauseous, with a slight astringency. It grows to the trunk of the larch-tree, and is seldom or never found on the boughs. The best is white, light, and brittle. It goes under the denomination of a purge, though some deny it has any such quality, and is at best a useless medicine.

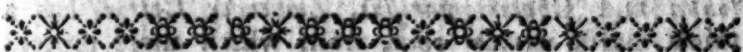
AGARICUS PEDIS EQUINI FACIE, *Touch-wood, or Spunk*, grows to the ash and other trees; but that is supposed to be the best that grows to old oaks that have been lopped, and which has been gathered in *August* and *September*. This has of late been mightily cried up for stopping of blood upon the amputation of a limb, without making any ligature; but it has had the fate of many new discoveries, and

is now almost entirely laid aside; though it might doubtless be of use in many cases. The inward part is best which feels to the touch like buff, which must be taken out, and beaten a little till it may be easily teased between the fingers. This being done, for much of it must be applied to the wound as will somewhat more than cover it, and over this a broader piece must be laid with proper bandages.

The END of the First Part.

THE

THE NATURAL HISTORY OF VEGETABLES.



PART II.

*Of indigerous Herbs, Plants, Sbrubs, and
Trees, and their uses in Medicine.*

INDIGENOUS plants are those which are produced in our climate, some of which have been, or are, used in medicine; while others are quite uselefs, at least as far as is hitherto known; and therefore they may be passed over in silence. In giving an account of them, I shall observe an alphabetical order, that each of them may be more readily found; but as for the *English* names they shall be added alphabetically at the end.

ABROTANUM MAS, *Southernwood,* of which there are two kinds of use in medicine, one of which is called the male, and the other the female; but the first of these is properly the Southernwood. In its characteristics it is much the same as wormwood, and its root is woody, with a few fibres proceeding from it. It has many branches, which sometimes rise to the height of four cubits, though they are generally much lower; they are hard, brittle, and full of a white pith, somewhat of a reddish colour, and are streaked and branched. It has many leaves, somewhat broader than those of fennel; and those below are divided into several parts, but those above have only one or two segments. They are of a hoary colour, with a strong agreeable smell, and a bitterish taste. The flowers on the sides of the
branches

branches are like those of wormwood, and consist of many small blossoms that are tubulated and divided at the top into five parts, in each of which there is a single seed, and they are all comprehended in a scaly cup. It is cultivated in gardens, by slips or cuttings, planted in the beginning of April on a bed of fresh light earth, observing to water them two or three times a week, till they have taken root. These leaves are often used in fomentations.

ABROTANUM FOEMINA, by some called *Santolina* and *Chamæcyparissus*, *Lavender Cotton*, has a thick, hard, woody root, from which there proceed branches above a cubit in height, which are woody, slender, covered with a hairy down, and divided into several branches, round which there are slender leaves about an inch in length, a little denticulated, or rather beset with small tubercles. They are all of a hoary colour, and of a physical smell, with somewhat of a sweetness; the taste is partly acrid, and partly of an aromatic bitter. On the top of each branch there is a yellow flower, consisting of several tubulous florets, divided at the top into five parts, with imbricated intermediate leaves, and contained in a common scaly cup. The cup of each floret, or embryo, turns into a streaked oblong brown seed, not at all furnished with down. These flowers are larger than those of southernwood, by which it may be distinguished from it, as well as by the whole appearance of the plant. This plant is cultivated in gardens, and may be propagated by planting slips or cuttings during the spring, which should be put into a border of light fresh earth, and watered and shaded in hot dry weather, until they have taken root. It is of little use in medicine, except in fomentations.

ABSINTHIUM VULGARE, *common Wormwood*, has a lignous and fibrous root, with stalks of an indeterminate height, branched out into many small shoots, with hoary leaves of a bitter taste, and furnished with spikes of naked flowers, hanging downwards, which are placed in long rows towards the top. They are composed of many tubulous florets, divided into five parts at the top, and are of a yellow colour; they are all

all contained in a common scaly cup, in each of which there is an embryo, which turns into a naked seed. It differs from other sorts of wormwood, in having larger leaves and more jagged. It is very common in all parts of *England* by the sides of high roads and in dunghills. It is planted in gardens for common use, and may be propagated by slips in *March* and *October*; or it may be raised from seeds, which may be sown soon after they are ripe. Wormwood has always been looked upon as a valuable medicine, to promote the heat and circulation of the blood, and to recover the oscillation of the fibres while sluggish; by which means the gross humours are attenuated, and brought back into the common road of circulation. It restores the debilitated functions of the viscera, and is an excellent stomachic. It is good in the dropsy, green sickness, cachexies, and agues; which last it has often been known to cure. It also by its great bitterness is of some service against worms, by resolving the mucilaginous humours in which their eggs are contained; however, in all hot diseases and in inflammatory dispositions it is not safe.

ABSINTHIUM MARITIMUM, *Sea Wormwood*, has leaves much smaller than the common; they are hoary on the upper side as well as the lower, and the stalks are also hoary all over. It grows wild about salt marshes and near the sea coasts. The virtues are much the same as those of the former.

ABSINTHIUM ROMANUM, *Roman Wormwood*, differs much in appearance from the former. It has a great number of small and woody roots full of fibres, and the stalks are about a cubit in height, which are round, smooth, greenish, or of a reddish green or purplish colour. They are full of leaves from the top to the bottom, which have much the same appearance as those of southernwood, only they are shorter. The flowers are much like those of common wormwood, but less. It is cultivated in gardens, and may be easily raised by the planting and cutting of slips in the spring or autumn. The roots of this plant creep so much, that they will soon spread over a large piece of ground. It is not so bitter as the common wormwood, but is

more aromatic; for which reason it is more agreeable to the taste. It has the same virtues as the common wormwood, but weaker.

ACANTHUS, BRANK URSINE, has a thick fleshy root, black without, and white within, from whence proceed great numbers of fibres. The leaves that lie on the ground are a cubit in length, and a span in breadth; but the stalks rise to two cubits high, are strong, and adorned with a long row of flowers elegantly disposed like a thyrsis. The leaves are somewhat like those of a thistle, and after them the *Romans* adorned the capitals of the *Corinthian* order of columns; that is, with the shape of these leaves; they were likewise imitated by embroiderers, in the time of *Virgil*. The flowers are labiated, and are of a sort of a flesh colour; the under lip of the flower is divided into three segments, which at the beginning is curled up in the form of a short tube. There is no upper lip, but in its place there are stamina that support the pointals, and the cup of the flower is composed of prickly leaves, the upper part of which is bent over like an arch, and supplies the defect of the upper lip of the flower. The pistil arises from the hinder part of the flower, and turns to a fruit in the shape of an acorn, which is divided into two cells, each containing a single smooth seed. The whole plant is full of a glutinous and mucilaginous juice. It grows spontaneously in *Sicily* and *Italy*; but is here cultivated in gardens, and is easily propagated by parting the roots in *February* or *March*, or by sowing the seeds at that time. It is seldom used in medicine.

ACETOSA, common Sorrel, has a long, fibrous, yellowish, bitter root, and leaves placed alternately on the stalk, in the shape of a spade. The stalk is streaked, a foot in length, and is divided into several branches. The impalement of the flower is composed of three small leaves that are bended back, and the flower has three leaves, which are larger than those of the impalement. In the center of the flower is a three-cornered pointal, or pistil, supporting three small styles, which are attended with six stamina. It afterwards becomes a triangular seed, inclosed by the petals of the flower;

flower; in short, it agrees with the dock in all its characters, except in having an acid taste. It is but a small plant in the fields, but in the gardens it produces large leaves. It must be sown early in the spring, in a shady moist border; and if it be afterwards planted out into another shady border, it will produce still larger leaves, and continue longer. The medical virtues are to cool and quench thirst, and their decoction makes a useful drink in fevers. It is also an excellent antiscorbutic.

ACETOSA ROTUNDIFOLIA, *round leaved or French Sorrel*, has the same characters as the former excepting the leaves, which are now and then almost round. This is the best sort for the kitchen use, for which reason it is often planted in gardens. The roots are very apt to spread, by which means it is easily propagated, and must be planted at larger distances, that is, a foot square at least. It is a cooler like the former, and quenches thirst as well as excites an appetite.

ADIANTHUM VERUM, *the true or French Maiden-hair*, is a capillary plant, and has a fleshy fibrous root, from whence arise slender, black, shining, branched pedicles, above a palm in height, which sustain leaves placed alternately, that are about a quarter of an inch broad, and somewhat shorter; they are green, crested, smooth, and streaked as it were with rays, and are like those of coriander. It seems to be without seeds; however, in *September*, certain notches appear in the leaves, which adhere to each other, and contain a fruit, or round membranaceous capsula, which is very small and surrounded with an elastick ring, which by its contraction opens the capsula, which then emits a seed like dust, that is too small to be examined by the naked eye. It grows spontaneously in the northern parts of *France*, and continues green all the year. This herb was formerly celebrated for its pectoral virtues, but is now greatly neglected. A syrup is made of this herb, which is sold in the coffee-houses, and called *Capilaire*; but it is generally supposed to be counterfeit.

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AGNUS CASTUS, *the Chaste-tree*, is a shrub full of branches, so tough that they are not easily to be broken. The leaves are joined to a pedicle, an inch or two long, and divided into five particular leaves, of an oblong shape, and sharp at both ends. The flowers grow in spikes; and are of a purple, or purple and white colour. They consist of one leaf, which looks as if it had two lips, and the fore part is tubulous. From each calyx arises a pointal, or pistil, which is fixed on the back part of the flower like a nail, and afterwards turns to an almost spherical fruit like pepper, divided into four cells, containing oblong seeds. It is cultivated in gardens, is very hardy, and may be propagated by planting the cuttings early in the spring, before they shoot. They require a fresh light soil, and must be frequently watered, till they have taken root. They will grow to eight or ten feet high, and flower in autumn; the flowers grow in spikes at the extremity of every strong shoot. This shrub is acknowledged to be good in hysterical complaints, and in hypocondriacal spasms, especially if they proceed from gross viscid humours. The seed, in powder, is given from half a dram to a dram, or in an emulsion.

AGRIMONIA, *Agrimony*, has a blackish, thick, fibrous root, and a hairy branched stalk, two cubits high, with leaves above a palm in length, alternately placed, which are rough, hairy, pennated and grow alternately on the branches. The calyx, or flower-cup, consists of one leaf, which is divided into five segments, and the flowers, which have five or six leaves, form a long spike, which expand in the form of a rose, and are of a yellow colour. The fruit is oblong, dry, and prickly like a burdock, and in each there are two kernels. It is common in the hedges in many parts of *England*, and is noted for its astringent quality. It is said to be good in the cachexy, dropsy, jaundice, and in fevers arising from the obstructions of the viscera. It is also good in ulcers of the kidneys. The dose of the dried leaves is a dram in a proper vehicle.

ALCEA, *Vervein Mallows*, have a woody whitish root, from whence proceed several stalks to the height of a cubit, which are round, full of pith, and thinly beset

beset with longish hair. The leaves that proceed from the root and lower part of the stalks are roundish, with incisures on the edges; but those that grow near the top, and placed alternately, are remarkably jagged, and of a blackish green colour and hairy, particularly on the lower part. The flowers are like those of mallows, and of a purplish flesh colour, though they are sometimes white; they are succeeded by seeds, which are black when ripe, are shaped like those of mallows, and have the same faculties as that plant.

ALCHIMILLA, *Ladies Mantle*, has a root as thick as one's little finger, and is fibrous and black; from whence arise long pedicles, a palm and a half in length, which are hairy, and each sustain a single leaf, nearly like that of mallows, but more hard and crisp, and divided into eight or nine acute angles. The cup of the flower is divided into eight segments, which are expanded in the form of a star; the flowers are collected into bunches on the top of the stalk, which consist of several stamina with yellowish heads. The calyx becomes a capsula, containing generally two little round yellow seeds. It delights in mountainous places, such as the *Alps* and *Pyrenees*. It also grows wild in some parts of *England*. This plant is seldom made use of in medicine.

ALKEKENGI, *the Winter Cherry*, has a geniculated root beset with small fibres, from whence arise reddish hairy branched stalks, a cubit in height, from the knots of which arise two leaves with long pedicles. The leaves are like those of garden nightshade, and the flowers consist of one leaf, expanded at the top, and of a whitish colour, but of a pentagonal figure. The fruit, which is about the size of a cherry, is inclosed in the flower-cup, and swells over it in the form of a bladder. The fruit is only in use, and is good to promote urine, as well as to cleanse the kidneys and bladder. From three to eight of these cherries may be taken as a dose, and are said to have had a very good effect in preventing the gout, when eight of them were taken every change of the moon. It is very common in *English* gardens, and the fruit, which is ripe in *October*, often continues till the beginning of *December*.

It is of the size of a common cherry, and of a fine red colour; the bladder that incloses it is of a deep red, which bursts when ripe, and exposes the fruit to sight. It may be propagated by sowing the seeds in the spring, or by the roots, which creep very much, so as to overspread a large tract of ground; and therefore they should be placed in pots, and set in a shady place in summer. If well watered in dry weather, it produces great numbers of cherries.

ALLIUM, *Garlick*, has a bulbous root, consisting of several membranes, and is of a whitish colour, with a purplish cast. The leaves are oblong, and not fistulous as in onions, but like grass, and the flowers consist of six whitish leaves, with a pistil in the middle, which turns into a roundish fruit of the size of a pea, and of a purplish colour without, but the pulp within is whitish. It is divided into three cells, full of roundish and blackish seeds. *Garlick* is proper to warm and stimulate the solids, and to dissolve the gross clammy fluids, whence it is good in cold constitutions, and in moist asthmas, as well as all defluxions on the breast. It has been found very serviceable in the dropsy, for it will sometimes cure it without any other medicine. It may be given alone, in a decoction, or made into a syrup; but it must be avoided in all inflammatory dispositions and hot diseases. It may be easily propagated in gardens, by planting the cloves, or small bulbs, in *August* or *September*, about four or five inches from each other. In the middle of *June* the leaves should be tied in knots, to prevent their running to seed, and then the bulb will be greatly enlarged. Towards the end of *July*, the leaves will begin to wither, and then the root should be taken out of the ground, and hanged up in a dry room.

ALNUS, *the Alder-tree*, is strait and upright, and of a moderate thickness, with a rough, brittle, blackish bark. The wood is reddish, soft, light, easily worked, and the boughs are very brittle. The leaves resemble those of the hazle, and the male flowers, or catkins, are produced at remote distances from the fruit, which is scaly, conical, and of the size of a hazle-nut. The bark, catkins, and fruit, are astringent, and the deco-

tion has been prescribed in inflammations of the tonsils, as a gargle. Some recommend the bark in intermitting fevers.

ALTHÆA, *Marsh-mallows*, has a great number of white roots, about as thick as a finger, which all proceed from one head. The stalks are a cubit or two in height, and are slender, round, villous, and beset with leaves alternately, which are roundish, but sharp at the end, hoary, and beset with a soft down; they are about three inches long, and are sinuous and serrated. The flowers come out between the pedicles of the leaves and the stalk, and are of a pale reddish colour. They are monopetalous, but divided into five segments, almost to the center, in which is a pyramidal tubulous style, loaded with stamina; and in the cavity there is a pistil, which turns into a round flat fruit, consisting of several capsula, disposed like a ring about the cake in the middle. Marsh-mallows is very much in use to abate the acrimony of the urine; in disorders of the lungs, to thicken a sharp salt defluxion; and consequently is good in hoarsenesses, coughs, catarrhs, and the asthma. It is likewise good in erosions of the intestines, its decoction being drank, or given in glisters. It is also good for softening hard tumours, and easing pain. The leaves are much preferable to the roots. Syrup of marsh-mallows is a medicine commonly known, and is often prescribed to render the urinary passages slippery to those who are troubled with the gravel.

AMYGDALUS, *the Almond-tree*, has strong branched roots, with a rough trunk, and leaves like those of the peach tree, which are sharp at the ends, and crenated on the edges. The flowers are rosaceous, consisting of five petals, of a whitish, or light purplish colour; the calyx is single, but divided into five segments, with a pistil that turns to a fruit an inch in length, which is long and flat. The outer coat is thin and pretty dry when ripe, under which is a shell that is not so rugged as that of the peach. As for the almonds themselves, they are too well known to need a description. When they are bruised, they yield a large quantity of limpid oil, and when made into an emulsion with water, have a sweet

a sweet pleasant taste, but if it be kept long it will turn sour like milk. Sweet almonds, when fresh, are nourishing, but they should be well chewed before they are swallowed. In all medicinal uses they should be blanched, that is, the outer skin should be taken off. The emulsion of sweet almonds is prescribed in burning fevers, too great watchfulness, heat of urine, and inflammations of the kidneys and bladder, as well as in all cases where the acrimony of the humours is to be corrected. It is given from one to four, and in some cases to eight ounces, and should be repeated every third or fourth hour. When children are griped, it should be given by spoonfuls, mixed with syrup of marsh-mallows.

AMYGDALUS AMARA, the *bitter Almond tree*, agrees with the former in all respects, except the bitterness of the fruit. They have been found to be poisonous when given to dogs and some other animals, but they may be eaten by men without any damage. The oil that is expressed from bitter almonds differs a little or nothing from the former, and may be used in the same cases; as also for softening the wax in the ears, when put therein with a bit of cotton wool. Almond-trees are chiefly valued for the beauty of their flowers, which are produced early in the spring, and make a fine appearance. They are propagated by inoculating one of their buds into a plum, almond, or peach stock, the latter end of July. The best season for transplanting these trees into a dry ground, is when the leaves begin to decay; but for a wet soil, in February.

ANAGALLIS MAS, male *Pimpernel*, has a white single root, with a few fibres, and the stalks are so weak that they lie on the ground; they are of the length of a palm, are square and smooth, and the leaves are placed by pairs, and sometimes three at a time opposite to each other; but they have no pedicles. The lower surface is spotted with blackish red spots; and the flower consists of one leaf, shaped like a wheel, and divided into five sharp segments, which are of a purplish red, with purple stamina, on which are yellow heads. The flower-cup is also divided into five parts, from which a pistil arises, fixed in the middle of the flower like a nail, and turns to a fruit, or globous shell, which

when ripe opens transversely into two parts, one of which lies upon the other, and incloses many angular wrinkled seeds. This is one of those called the sleeping plants, whose flowers open about eight o'clock in the morning, and never close till past noon.

ANAGALLIS FOEMINA, *female Pimpernel*, differs only from the former in the colour of the flower, which is blue, and being common in our corn fields; but this is more scarce. The male pimpernel is used as a sallad and a pot-herb in many parts of *England*.

ANETHUM, *Dill*, has a slender white fibrous root, with a branched stalk, a cubit and a half in length; the leaves are like those of fennil, but less, and of a bluish colour, with a strong smell. The flowers are placed at the top of the stalks in umbels, and are roseaceous, consisting of five yellow petals, whose calyx or flower-cup is changed into two palish yellow seeds, which are oval, flat, streaked, and have a foliaceous border. It is propagated from the seeds, which should be sown in autumn, soon after they are ripe, and thrive best in a light soil, where they are to remain, for they will not bear a removal. The seeds are only in use, and they have been commended in the flatulent cholic, and against wind. The essential oil is a carminative, and is given from two to four drops on a lump of sugar.

ANISUM VULGARE, *Anise*, has a slender annual fibrous white root, with pleasant green leaves, above an inch in length, which are divided into three parts, or particular leaves, which are smooth and crenated. On the upper part there are many divisions, and the stalk is ramous, streaked, hollow, and sustains flowers disposed in an umbel, which are small, roseaceous, and consist of five cloven white petals, with the flower-cup, that turns into an oblong turbinated fruit, in which are two small gibbous streaked seeds, of a greenish ash colour. The taste and smell are sweet and very agreeable. The seed is only in use, which contains a great deal of essential oil. It is numbered among the four hot seeds, and is recommended for the helping of digestion, in the wind, cholic, and in shortness of breath. It is good for gripes in children, and to increase milk in the breasts of nurses. The dose, in powder,

powder, is from a scruple to a dram, and that of the essential oil, from two drops to twenty.

ANONIS *five* **ONONIS**, *Rest Harrow*, has roots above a foot long, which creep every way, and are not easily broken. The stalks lie on the ground, and are slender, tough, reddish, hairy, and full of prickles; they are beset with leaves, placed three together alternately, and are roundish, slightly crenated, hairy, of a dark green colour, and glutinous to the touch. The flowers are papilionaceous, of a light purple, or flesh colour, and grow in spikes at the top of the branches. The pistil is near a quarter of an inch long, and consists of one bivalved flat capsula, containing a single seed in the shape of a kidney. It is said to open obstructions of the liver, and to cure the jaundice; but it is now out of use.

APARINE, *Goose-grass*, or *Clivers*, has a slender fibrous root, with slender, quadrangular, geniculated, rough, climbing stalks, three or four cubits long. At every genicula, or knee, there are from five to seven leaves placed like a star, which are narrow, rough and terminate in prickles. The flowers proceed from the knees towards the top, and are very small, white, monopetalous, in the shape of bells, and divided into four segments, as well as the flower-cup, which turns into a dry, hard, cartilaginous fruit, covered with a thin blackish skin, and consist of two globes full of umbilicated seeds. It is met with almost every where in hedges. It is inciding and aperient, and not only promotes urine but sweat. Two ounces of the juice have been found to be very serviceable in the dropsy, carrying off the water by urine.

APIUM PALUSTRE, *Smallage*, has a thick, whitish stait root, descending deep into the ground, and is sometimes deeply divided into different heads; it has an acrid, bitter, disagreeable taste, with a strong aromatic smell; from the root proceed many leaves standing upon long pedicles; they are reddish, streaked, concave, and are divided into wings, or grow upon a branched rib; they are also cut into five segments, and are smooth, neat, juicy, and of a pleasant green; when rubbed with the fingers they have a strong smell, and

and the taste is not very disagreeable. The flowers proceed from the joining of the pedicles to the stalk, as well as the top, where they are collected into an umbel, and are small, rosaceous, and consist of five white petals; the calyx turns to a fruit, containing two very small seeds, which are streaked, ash coloured, depressed on one side, and gibbous on the other. It delights in moist marshy places, and is by some transplanted into gardens. The seeds are reckoned among the four lesser hot seeds.

AQUILEGIA, *Columbines*, has a white root an inch thick, which is branched and fibrous, and of a sweetish taste. It has leaves like meadow rue, they being cut on the edges, and are bluish underneath, but above of a dark green, with a bluish cast. The flowers are pendulous, and consist of many petals unlike each other; from the middle of the flower arises the pistil, beset with stamina, which turns to a membranous fruit, consisting of many husks, or pods, each of which is full of black shining seeds. The colours of the flowers are various, as blue, red, white, flesh-coloured, and green, upon which account it is cultivated in gardens, and they flower in *May* and *June*. For raising them, the seeds should be sown in a nursery-bed in *September*, and in *March* following the young plants will appear above ground, which should be transplanted in the middle of *May* into good fresh earth, and set at nine inches distant every way. At *Michaelmas* they may be removed into the borders of a flower garden, and the *May* following they will produce flowers. It has been looked upon as an aperient and sudorifick; but it is now out of use.

ARGENTINA, *Silver Weed*, or *Wild Tansey*, has a blackish root, which is sometimes single and sometimes fibrous; the leaves are conjugated like agrimony, and they are deeply dentated on the edges; they have several small leaves set between them, and the upper part is of an herbaceous green; but the under like that of silver, they being covered with a soft down. The flowers are placed singly on long hairy pedicles, and consist of five petals of a gold colour, with a calyx divided into five sharp parts, between which are many small

small ones; and there are many stamina of the same colour, with heads thereon. The pistil changes into a spherical head, a quarter of an inch in diameter, full of seeds of a yellowish colour, and like those of poppies. Many physicians have a great opinion of this herb; for *Boerhaave* affirms it has the same virtues as the *Peruvian* bark. The dose of the juice is from four ounces to six, and of the seeds to half a dram.

ARMENIACA MALUS, *the Apricot-tree*, has roundish acuminate leaves, serrated on the edges, and four or five of them are placed together. The flowers, that come out early in the spring, before the leaves, are rosaceous, consisting of five whitish petals, disposed in a ring, with a calyx divided into five segments, from which a pistil arises that turns to a fleshy succulent fruit, very well known. There are seven sorts cultivated in the *English* gardens, which are, I. *The Masculine Apricot*, which is the soonest ripe of all, and has a small roundish fruit, of a red colour towards the sun, which as it ripens fades to a greenish yellow on the other side. It is only valuable for being soonest ripe, for it has little flavour. II. *The Orange Apricot*, which is the next that becomes ripe, and is of a deep yellow. The flesh is dry, and is better for tarts than for eating. III. *The Algier Apricot* ripens next, and is of an oval shape, only a little compressed on the sides. It turns to a pale yellow or straw colour when the flesh is dry, with a faintish taste. IV. *The Roman* is next, and is larger than the *Algier*, but not compressed on the sides; the colour is deeper, and the flesh is moister. V. *The Turkey Apricot* is the next in order, because it ripens later than the former, and is bigger than any of them, and has a globular shape. It is of a deeper colour, has a firmer flesh, and a better taste. VI. *The Breda Apricot* was brought originally from *Africa*, and is a large roundish fruit, turning to a deep yellow when ripe, and is of a deep orange colour on the inside. The flesh is soft, full of juice, and better tasted than any of the whole tribe. VII. *The Brussels Apricot* is the latest, it not being ripe till near the middle of *August*, unless exposed to a south sun; however too much heat spoils the taste. It is red on the side next the sun, with
many

many dark spots, and of a greenish yellow on the other side; the flesh is firm and of a high flavour, but it often cracks before it is ripe. The best standard trees are those that are about two feet and a half, or three feet in the stem; but they may be planted as dwarfs against an espalier, where, with good management, they will produce a large quantity of fruit. These fruits are all propagated by budding them on plumb stalks; and they are all, except the two last, planted against the walls, which should be either east or west. The borders under these walls should be six feet wide at least, and if the earth be two feet deep, or two and a half at most, it is enough. The soil should be fresh earth from a pasture ground, taken about ten inches deep with the turf, and laid to mellow at least twelve months before it is used, often turning it. The trees that are budded should be but of one year's growth, and if the soil is dry, *October* is the best month for planting. At *Michaelmas*, or soon after, when the trees have grown, you must unnailed the branches and shorten them, in proportion to their strength; for a vigorous branch may be left eight or nine inches long; but a weak one only five or six. When they are shortened they should be nailed as horizontally as possible.

With regard to the medicinal uses of apricots, there is little to be said, only that they agree best with persons of hot constitutions; for in weak stomachs they readily corrupt, and then produce feverish disorders, which however are easily cured with emetics and purges.

ARTEMISIA, *Mug-wort*, has a creeping fibrous root, about as thick as one's finger, with a sweet aromatic taste. The stalks grow to two cubits in height or upwards, and are round, streaked, strong, stiff, generally of a purple colour, and covered with short hair; they have also pith in the middle, and are branched, with leaves thereon, placed alternately, that are not unlike those of wormwood; they are of a dark green above, and hoary underneath, by which they may be distinguished from wormwood. The flowers grow on the top of the branches like spikes, consist of many florets of a purplish colour, and divided into five parts, which are comprehended in a scaly cup. Among the
florets

florets there are naked embryoes, which turn into a double capillament, which afterwards, as well as the embryoes of the florets, turn into seeds like those of wormwood, but have not so strong a smell. It is generally accounted anti-hysteric, and is very often in use among the women for female disorders. In some parts of the kingdom it is used as a pot-herb. The dose of the dried herb is three drams, drank in wine, and is said to be a good remedy against the hip-gout.

ARUM, *Cuckew Pint*, or *Wake Robin*, has a tuberose fleshy root, as thick as one's thumb, but roundish, white, and full of a milky juice; the leaves are about eight inches long, a little triangular, and somewhat in the shape of the head of an arrow. The stalk rises to a cubit in height, and is round, streaked, sustaining a membranaceous flower like an ass's ear, contained in a sheath of a whitish green, in which is a pistil of a palish yellow, from which proceed berries, that are almost globous, and disposed into an oblong head; they are of a reddish purple, soft, full of juice, and contain a seed or two, that are hard, small, and roundish. The whole plant has a most acrid taste that burns the tongue. The root is only in use, and when tasted bites the tongue so much that it may be felt a whole day. It has many virtues, but is good in serous disorders, the cachexy, the green sickness, agues, the dropy, the jaundice, and is excellent in all diseases that proceed from clammy humours, as well as for opening the obstructions of the viscera. It is also good in a moist viscid catarrhal cough, and to restore the tone of the stomach. It has this peculiarity, that it will cause those to sweat who can hardly be brought to it any other way, when taken to the quantity of a dram in any good spirit; but if it be dried and taken in powder, then this medicine will fail. The best way of giving it is by beating the fresh root with gummy resins, and making the mass into pills. Outwardly it is very proper to cleanse ulcers, particularly those that are fistulous. The common dose is from half a dram to four scruples.

ASARUM, *Asarabacca*, is an ever-green herb, which has a slender, angular, knotty, fibrous, ash coloured

Coloured root, with a bitterish, nauseous, stomatic taste, somewhat like garden valerian; the leaves are round, stiff, shining, of a dark greenish colour, and are sustained by long pedicles; they are somewhat in the shape of an ear, for which reason they are called in *French*, *Orielle d'homme*, that is, man's ear. The flowers are hid in the leaves near the root, and are of a purple colour, which are scarcely perceivable, except the flower-cup, which is divided into three or four segments, and of a blackish purple colour. The fruit is divided into six cells, full of oblong seeds, that look like the stones of grapes. It delights in woody places, and is found wild in some parts of *England*, though but seldom. The flowers appear in *April*; but grow so close to the ground as not to be seen, unless you put away the leaves with your hand. It is best raised by slips. The leaves are a strong vomit, as well as the roots, working both upwards and downwards; but the leaves are chiefly in use, to make a sneezing powder, and are said to be the principal ingredient in *Major's* Patent Snuff.

ASCLEPIAS, *five* VINCETOXICUM, *Swallow-wort*, or *Tame Poison*, has a root full of fibres, which proceed from a single head, and has an acrid, bitterish, disagreeable taste, with a nauseous smell; the stalks are tough, hairy, and geniculated, and rise to a cubit in height; the leaves are placed by pairs over against each other, and are a little hairy on the edges; they are in the shape of the leaves of ivy, but are longer, more wrinkled, and have very short pedicles. From the joints of these pedicles, with the stalk, proceed whitish monopetalous flowers, in the shape of a bell, and are divided into five parts, expanded in the form of a star, with five apices of the same colour, and a cup divided into the same number of parts, with a pistil fixed in the hinder part of the flower, like a nail, that turns to a fruit composed of two membranous husks that open from the bottom to the top, inclosing many seeds, that are covered with a fine down, and are fixed to the membrane like scales on the skins of fishes. It has no milky juice like dog's-bane, by which it may be distinguished from it. It is propagated by parting the roots,

either in spring or autumn, which will grow almost in any soil. It has been cried up as an antidote against poison, but is now neglected for that purpose. It is much more proper for acute, than chronic diseases; because it is a gentle resolvent, and promotes both sweat and urine.

ASPARAGUS, *Asparagus*, corruptly called *Sparrow-grass*, has a great number of roots, proceeding from a single head, that are round, fleshy, whitish, sweetish, and clammy. Early in the spring they emit tender, long, round, green shoots, without leaves, that are so well known they need no description. When they are grown up they arise to the height of two cubits, and are divided into slender strong branches, with green, capillaceous, soft leaves, an inch in length. The flowers are rosaceous, with six petals of a pale green colour, and a pistil that turns to a soft berry of the size of a pea, that is globose, purplish, soft, sweetish, and contains two or three umbilicated black seeds. It is cultivated in gardens for the use of the kitchen. *Asparagus* provokes the appetite, but yields little nourishment, and gives the urine a particular strong smell. It has little or no medicinal virtues.

ATRIPLEX FOETIDA, *Stinking Orach*, or *Arach*, has a slender fibrous root, from whence generally proceed branched stalks, about nine inches in length, with roundish small leaves terminating in a point, and are covered over with a mealy whitish powder. The flowers grow on the top of the stalks, and are without petals; for they consist of many stamens, arising from a calyx divided into five parts, with a pistil that turns into a single, small, shining, blackish, and roundish flat seed in a capsula, in the form of a star. It grows in uncultivated places, and near the sides of roads. It is antihysterick, and the infusion of the leaves taken hot is an excellent medicine against the hysterick passion.

AURANTIA MALUS, *the Orange-tree*, is not very tall, but has a thick, woody, branched root, which spreads very much, and is of a yellow colour on the inside. The trunk is hard, whitish within, has an agreeable smell, and is covered with a greenish, smooth,

white



The Orange Tree.



white bark. The branches are numerous, flexible, and of a beautiful green, with a few thorns thereon. The leaves are somewhat like broad leaved lawrel, and are always green, thick, smooth, broad, and ending at each end in a point, with a foliated pedicle in the shape of a heart. When held up to the light there appears to be a sort of holes in them like *St. John's wort*. The flowers grow in bunches, and are rosaceous, consisting of five white petals placed in a ring, with many stamina, which have yellow apices, or heads; at the bottom and center of the cup there is an orbicular placenta, which sustains a roundish pistil with a long tube, that runs into a globeus fruit, covered with a rind, which is very well known. There are several kinds of oranges, as the *common Seville Orange*, the *sweet Seville Orange*, the *Cbina Orange*, the *curled leaved Orange*, the *striped curled leaved Orange*, the *horned Orange*, the *common striped Orange*, the *Hermaphrodite Orange*, the *willow leaved Orange*, commonly called the *Turky Orange*, the *striped Turkey Orange*, the *Pumple Nose*, or *Shaddock Orange*, the *double flowered Orange*, the *common Dwarf*, or *nutmeg Orange*, the *dwarf striped Orange*, the *dwarf Cbina Orange*, the *childing Orange*, the *distorted Orange*, the *large warted Orange*, the *starry Orange*, and the *Orange with a sweet rind*. Many sorts of these oranges are cultivated in *England*, though more for curiosity than the fruit they produce; and of late years some of them have been planted against walls, with frames of glass to cover them in the winter. Some curious persons have likewise planted them in the open ground, and have had covers for them, which have been taken away in the summer; by this means the fruit has ripened so well as to be extremely good for eating. However, in hard winters it is very difficult to preserve them.

Orange peel is an excellent bitter, especially that of *Seville oranges*, which strengthens the stomach, helps digestion, attenuates gross humours, discusses wind, and eases cholic pains proceeding therefrom. It is an ingredient in tinctures, called stomachic bitters, and is now common in taverns, where they mix it with a glass of wine, and drink it before dinner to create an

appetite. The essential oil distilled from the rind is also proper for the same uses, when two or three drops are taken upon sugar, as well as the peel, when it is candied. The pulp of sweet oranges is cooling, quenches thirst, and excites the appetite; but the juice of sour oranges not only serves to make a cooling drink in hot weather, but is of late found to be excellent against the scurvy.

BARDANA, *Burdock*, has a thick single, strait root, a foot in length, blackish on the outside, white within, and of a sweetish subaustere taste. The leaves are large, being a foot long and upwards; they are sharplish at the points, hairy, and of a dark green colour, but hairy underneath. The flowers consist of many purple florets, deeply cut into five segments, resting on the embryo, which is contained in a cup made up of many scales, that terminate in hooks, and bend inward. The embryo turns into an oblong, flat, streaked, flattish seed, with short down or rather tufts of hair. It is to be met with every where by the waysides. The root is diuretic, sudorific, pectoral, uterine, vulnerary, and febrifuge. It has been of late greatly recommended in the gout. It is given to a dram in powder, and to an ounce in decoction. The seeds of burdock are of a bitter subacrid taste, and are a powerful diuretic, when a dram of them is taken in white wine, or any other proper vehicle.

BECCABUNGA, *Brook-lime*, has fibrous, white, creeping roots, with upright stalks, that are round, spongy, reddish, and branched. The leaves are roundish, smooth, thick, crenated, of a dark green colour, and above an inch in length. The flowers proceed from the places where they join to the leaves, and are placed on spikes, a palm, or a palm and a half, in length; they are monopetalous, but divided into four segments, and are of a bright blue colour. There are three blue apices, and a pistil that turns into a membranaceous flat fruit, of the shape of a heart, and a quarter of an inch long. It is divided into two cells, containing many small flat seeds. This herb has no remarkable taste, and yet some prefer it to other more acrid antiscorbutics. The dose of the juice is four ounces; but

it.

it is best mixed with the juice of oranges, and then it may have a very good effect in hot scurvies.

BELLA DONNA, *Deadly Night-Shade*, has a thick, long, juicy, whitish root, divided into several branches; the stalks are two cubits high, and are round, as thick as one's thumb, branched, hairy, and of a reddish black. The leaves are like those of garden night-shade, which are twice or thrice as large, and are soft and somewhat hairy. From the place where the leaves join to the stalks the flowers proceed, which are monopetalous, in the shape of a bell, divided into five segments, streaked, a little hairy, and of a dark purplish black, with five stamina, and as many whitish apices. From the calyx it is hairy, and divided into five parts; the pistil proceeds, which is fixed into the hinder part of the flower, like a nail, and turns into a soft round fruit, like a grape, of a shining black colour, and full of a vinous juice. It is divided by a partition in the middle into two cells, full of many minute oval seeds. It grows in woods, near walls and hedges, and in other uncultivated places. The fruit, or berries, have often proved of dangerous consequence to children who have eat them. They produce a delirium, laughter, various gesticulations, and at last madness.

BELLIS MAJOR, *the greater, or Ox-eye Daisy*, has a fibrous creeping root, with stalks two cubits high, that are erect, of a pentagon shape, villous, and branched, with flat leaves placed alternately, two inches long, half an inch broad, and crenated. The flowers are large, radiated, and their disk consists of many gold coloured florets, divided into five segments, with a style in the middle of each; but the crown is composed of white semi-florets, resting upon embryoes, and placed in a hemispherical scaly blackish cup. The embryoes at length turn into slender, oblong, streaked, naked seeds. The heads, after the petals are fallen off, resemble obtuse combs.

BELLIS MINOR, *the common Daisy*, has many small roots, with a great number of leaves lying on the ground, that are flat, hairy, long, and narrow towards the root, sensibly increasing to the end, where they are

roundish, and they are slightly serrated. It has no stalk, but there are many pedicles between the leaves, a palm or upwards in length, which are slender, round, hairy, and on the top of each there is a flower, whose disk is composed of many yellow florets, and the crown of semi-florets, of a white colour with a reddish cast. The embryos are placed in a single cup divided into many parts. The embryos afterwards turn to small naked seeds: it is every where common in meadow or pasture lands. Besides these there are the *small striped Daisy*, the *red garden, with double flowers*, the *white double garden Daisy*, the *double striped garden Daisy*, the *hen and chicken Daisy*, the *white cock's-comb Daisy*, and the *red cock's-comb Daisy*. The garden Daisies are propagated by parting the roots in autumn, and should be planted in gardens of strong earth, and be exposed to the east, for the great heats of summer will sometimes kill them. The leaves of the ox-eye daisy gathered before the flowers appear, yield a decoction of an acrid taste, not much unlike pepper. It is commended in purulent spitting. The lesser daisy has been generally accounted good for internal wounds, and for dissolving and discussing grumous blood.

BERBERIS, *the Barberry-tree*, is a tall shrub, having fibrous, yellowish, creeping roots, and the branches are beset with sharp thorns. The leaves are small, oblong, narrow at the bottom, but broader towards the top, are crenated on the edges, and beset with short thorns. They are smooth, green, and have an acrid taste. The flowers consist of six leaves, that expand in the form of a rose, consisting of six petals of a yellow colour, with as many stamina, and a greenish pistil, turning into a cylindrick red soft fruit, one third of an inch in length, and full of an acrid juice, containing one or two oblong kernels. The fruit grows in clusters hanging down, and the bark of the tree is whitish. The best method of planting them is to place them eight or ten feet asunder, keeping their middles thin and free from dead wood. The branches should seldom be shortened, but when it is done it must be at *Michaelmas*, when the leaves begin to decay. The fruit is cooling and astringent, and proper to strengthen

in the stomach and intestines, as well as to excite the appetite. The dose of the expressed fruit is an ounce, though they are eaten commonly when ripe. The juice, or decoction, abates the inflammation of the fauces and tonsils, and heals loose rotten gums. Dyers make use of the bark for colouring yellow.

BERULA, *five SIUM*, *Water Parsnip*, has geniculated, creeping, white, fibrous roots, from whence proceed stalks above a cubit in height, which are hollow, round, strait, branched, and have many leaves that are set thereon by pairs, with a single leaf at the end; they are fat, smooth, and cut all round the edges like a saw. The flowers are disposed in umbels, and placed at the end of the stalk; they are rosaceous, and consist of five white petals placed in a ring. The flower-cup turns to a roundish fruit, containing two small streaked and gibbous seeds. It delights in being in and near rivulets and ditches. It is accounted an antiscorbutic and aperient, and is thought to open obstructions. Three ounces of the juice is a dose; however, it is seldom used in physick, but in some countries is eaten as a salad.

BETA, *white and red Beets*. The *white Beet* has a round, woody, long, white root, about as thick as one's little finger, with large, broad, smooth, thick, succulent leaves, sometimes of a pale, and sometimes of a deeper green, with a thick broad rib. The stalks are slender, streaked, branched, and two cubits high. The flowers proceed from the hollow between the stalk and the pedicle of the leaf, of which there is a long row; and they have no visible leaves, but consist of many stamina, or threads, which are collected into a globe; the cup of the flower is divided into five segments, which turns into a globous fruit, containing two or three small oblong seeds of a reddish colour.

Red Beet has a white root, and shorter leaves than the former, more or less red, and sometimes of a blackish red. This is distinguished from the former by the number of the leaves.

The *Turnip rooted red Beet* has a higher stalk than the common red beet, and the root is two or three

inches thick, belying out; on the outside it is of a deep blood colour. All these beets are cultivated in gardens for the use of the kitchen; but they were in greater esteem formerly that they are at present. However, the red beet is still used to garnish dishes.

BETONICA, *Betony*, has a thick, transverse, fibrous, hairy root, from whence proceed quadrangular knotty stalks, growing to the height of a cubit. Some of the leaves proceed from the knots by pairs, placed over against each other, and others lie on the ground; they are oblong, villous, wrinkled, and of a darkish green colour, and are crenated on the edges. The flowers grow in spikes, and are monopetalous, labiated, and of a purplish colour; the upper lip is sulcated, and as it were reclines backwards; but the lower consists of three lobes, with stamina of the same colour as the former. The flower-cup is cut into five segments, from whence proceeds a pistil fixed in the hinder part of the flower, like a nail, with four embryos, that change to as many roundish seeds, contained in a capsula, that was the cup of the flower. It is common in woods and shady places throughout *England*. *Betony* is discutient and aperient, and has been always accounted an excellent medicine for the head, and the leaves reduced to powder promote sneezing; for which reason, and for its being a cephalick, it is always an ingredient in the herb snuffs.

BISTORTA, *Bistort*, or *Snake-weed*, has a thick, oblong, geniculated root, in shape like a finger when it is close bent, and has many hairy fibres. It is of a blackish brown without, and of a reddish colour within. The leaves are oblong, broad, and acuminate like those of the dock, but less; they are full of veins, and of a blackish green colour above, but bluish below; the stalks are about a foot in height, and are slender, smooth, round, geniculated, and beset with a few smaller leaves; for the largest grow at the bottom. The flowers grow like a spike at the end of the stalk, and are without petals; for they consist of many stamina, with flesh-coloured apices or heads. The cup is divided into five segments, and the pistil turns to a triangular reddish black shining seed, contained in a capsula,

capſula, that was the cup of the flower. The root is only in uſe. It is ſaid to be baſſamic, vulnerary, and aſtringent, and is uſed in all caſes where aſtringency is proper, particularly in hæmorrhages, ſpitting of blood, and overflowing of the menſes. The decoction of half an ounce to an ounce of the freſh root is a doſe, or rather it may be taken at ſeveral times; and the powder may be given from half a dram to a dram, made into a bolus with conſerve of roſes.

BONUS HENRICUS, *the Engliſh herb Mercury*, has a thick yellowiſh root, furniſhed with a few fibres, from whence proceed concave ſtalks, to the height of a cubit, which are a little hairy; the leaves are triangular, ſmooth above, but below ſprinkled with a ſort of meal, and they have long pedicles placed on the ſtalks alternately. The flowers, that grow in ſeveral bunches on the top of the ſtalks, are ſmall and without petals, but they have ſeveral yellow ſtamina proceeding from the flower-cup, which is divided into many ſegments. The piſtil turns into a ſmall ſeed, in the ſhape of a kidney, which is black when ripe. It grows in uncultivated places by the way ſide, and among the ruins of old walls and buildings. It is often uſed for food in many parts of *England*, and is reckoned as good as ſpinage. It is emollient, and has been ſometimes uſed as a cataplaſm to appeaſe the pains of the gout, and that without any danger.

BORRAGO, *Burrage*, has a white, thick, fibrous root, and broad, roundiſh, rough, wrinkled, blackiſh green leaves, that lie on the ground; but thoſe that are higher are furniſhed with exceeding ſmall prickles. The ſtalk is hairy, round, hollow, branched, and grows to the height of a cubit. The flowers, that grow on the top of the branches, are of a fine blue, placed on pedicles, an inch in length, that are crooked and bend downwards. The flowers have only a ſingle petal, which is deeply divided into five ſegments, ſharp at the ends, and placed like a ſtar; the apices in the middle of the flower are ſharp pointed, and adhere together in the ſhape of a pyramid. The flower cup is green, hairy, and divided into five acuminate ſegments, from which a piſtil ariſes, fixed in

the hinder part of the flower, like a nail; and there are four embryos, that turn into as many seeds in the shape of a viper's head. It is common in all parts of *England*, and is often found in dunghills and on public roads. The seeds of this plant may be sown in the spring or autumn, soon after they are ripe; it will grow almost in any soil, but that which is dry is best. It is often used in the summer time with balm for making cool tankards, and the flowers are said to be cordial, and to have many other virtues, as well as the herb, that are now disallowed.

BRASSICÆ, *Cabbages*, are of several sorts, as the common white *Cabbage*, the *Russian Cabbage*, the red *Cabbage*, the flat sided *Cabbage*, the sugar loafed *Cabbage*, the early *Battersea Cabbage*, the white *Savoy Cabbage*, the green *Savoy Cabbage*, the green *Broccoli*, the *Italian Broccoli*, the turnip *Cabbage*, curled *Colewort*, the must *Cabbage*, the branching tree *Cabbage* from the sea coast, brown *Broccoli*, common *Colewort*, the *Cauliflower*, the *Boorcole*, *Alpine Colewort*, perfoliated wild *Cabbage*, white *Cabbage* with a white flower, and the perfoliated wild *Cabbage* with a purple flower.

BRASSICA CAPITATA ALBA, the common white *Cabbage*, is very well known, and bears, like all the rest, flowers that consist of four leaves, or petals, in the form of a cross, which are of a yellow, or pale yellow colour, placed in a cup divided into four segments, from which arises a pistil that turns into a round, long, slender fruit, or pod, divided by a partition in the middle, and consisting of two cells, full of roundish blackish seeds.

BRASSICA CAPITATA RUBRA, the red *Cabbage*, has leaves like the common cabbage, but the colour is various, for sometimes they are of a blackish purple, sometimes of a greenish black, and at other times more greenish; but they have all red ribs and nerves.

BRASSICA RUBRA VULGARIS, the common red *Cabbage*, is taller than the former, and has a stalk that grows sometimes to the height of two yards, which is thick, of a blackish purple colour, and watry on the lower part. The leaves are irregularly placed, and are all

all of a greenish red, with some shades of blue, and wrinkled, with thick veins. The flowers that grow on the top of the stalks are yellow, and change into pods a palm in length, that contain red round seeds. The leaves are not collected into heads as the former, but continue expanded and open. It stands the winter very well, and continues several years. The ends of the branches in the spring are eaten as a sallad.

BRASSICA ALBA CRISPA, the *white Savoy Cabbage*, has round extremely wrinkled leaves, which seem to be divided into cells, and have short pedicles. They are collected into a small whitish head; but their extremities are of a dark green. The flowers and seeds are like the former.

BRASSICA CAULI-FLORA, the *Cauliflower*, has large leaves, upwards of half a yard in length, which are sharper than those of the common cabbage, but not so broad; they are of a light green with a bluish cast, and the nerves on the outsides are whitish. The leaves are collected into a head, but not so close as a cabbage, between which there is a heap of thick whitish soft flowers, that are generally in great esteem. When they are not gathered for the kitchen, they arise to a considerable height in time, and turn from flowers to pods like the former. These are all the sorts mentioned by medicinal writers, for the rest are only for the kitchen.

The common white, red, and long sided Cabbages, are chiefly cultivated for winter use, and the seeds must be sown at the end of *March* in beds of good fresh earth. Towards the end of *April*, when the young plants have about eight leaves, they should be pricked out into shady borders, about three inches square, to prevent their being long shanked. They should be transplanted in the latter end of *May* to the place where they are to grow, and should be set in rows, two feet and a half distant. If the season should prove dry when they are transplanted, they must be watered every other evening, till they have taken fresh root. As they advance in height, the earth must be drawn about the stems with a hoe, which will greatly strengthen the plants. Some

of these cabbages will be fit for use soon after *Michaelmas*, and the rest will continue till the beginning of *March*, if not destroyed by bad weather; to prevent which the gardeners near *London* pull up their cabbages in *November*, and trench their ground up in ridges, laying their cabbages against the ridges as close as possible on one side, and bury their stems in the ground. They are suffered to remain in this manner till after *Christmas*, when they cut them for the market.

The Battersea, and sugar loaf Cabbages, are for summer use, and are usually named *Michaelmas* cabbages. The seeds are to be sown in the beginning of *August*, in an open spot of ground, and when they have eight leaves they must be pricked into beds at three inches distant every way. Towards the end of *October* they must be planted out for good, two feet and a half distant from each other, and the rows must be three feet asunder. In the spring the earth must be drawn up about the stem with a hoe, and in *May* their leaves will begin to cabbage, to promote which they may be tied together with a slender osier twig.

The Savoy Cabbages are propagated for winter use; for a frost is thought to make them better. They must be sown about the middle of *April*, and cultivated in the same manner as common white cabbage, but somewhat nearer to each other.

The *BRASSICA FIMBRIATA*, that is, the *Broccole*, may be treated in the same manner, but need not be planted above a foot square. These are never eaten till the frost has rendered them tender; for otherwise they are tough and bitter. The seeds of the several kinds of broccoli should be sown the latter end of *May* or beginning of *June*, and when the plants have eight leaves they should be transplanted into beds, like the common cabbage; and at the end of *July* they will be fit to plant out for good, which should be in a sheltered spot of ground, but not under trees, and about a foot and a half distant each way. Towards the middle of *December* they will begin to show their small heads, which are somewhat like a cauliflower, but of a purple colour; and they will continue to be fit to eat till the beginning of *April*. The brown sort should

should be sown in *April*, and be managed like the common cabbage.

The *Turnip cabbage* is not so much cultivated as formerly, though some yet esteem them for soups. The seeds must be sown on a bed of light fresh earth, and when the plants are about an inch high, they should be removed to a shady border, and set at about two inches distant every way, watering them till they have taken root. Near the middle of *June* they should be transplanted out where they are to remain, and set at two feet distance every way, watering them till they have taken root; the earth should be drawn about them with a hoe, to prevent them from drying, and in the winter they will be fit for use.

The seeds of the curled colewort may be sown in the middle of *July*, and when they are strong enough for transplanting, they should be set in rows, nine inches asunder, and at five inches distance in the rows, in a moist season. They will be fit for use after *Christmas*, and continue good till *April*.

BRYONIA ALBA, *white Bryony*, or *wild Vine*, has a root sometimes as thick as a man's thigh, is fleshy, and divided into large branches; when it is dried it is spongy, and marked with circles and rays. The taste is acrid, bitterish, and disagreeable, and the smell while fresh is very strong. The stalks are long, slender, streaked, a little hairy, and climbing with tendrels like a vine. The leaves are angular, set alternately on the stalks, and are shaped pretty much like those of a vine, only they are less, and a little rough. The flowers proceed from the hollows where the leaves join to the stalk, and consist of a single petal, which is open in the shape of a bell, and divided into five parts, of a whitish green colour, marked with veins. Some of these flowers are large, and without embryos; others are less, and contain one embryo, which turns into a spherical berry of the size of a pea; it is at first green, then red and full of a nauseous juice, as well as round seeds, covered with slime. It may be cultivated in gardens by sowing the berries in the spring of the year in a dry poor soil, where they will in two years time grow to be large roots. It grows wild under hedges, and climbs upon

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the bushes. The juice of the root is so sharp that it eats into the skin; however, when they are dry, they lose a great part of their acrimony; it is a strong cathartic, and we have some notable instances of its killing and bringing away worms; it has been used in madness, and some kinds of dropsies with success, as well as in a moist asthma. The dried root, reduced to powder, is given from a scruple to a dram; but the extract made by water is much the best and safest, because it works in a milder manner, and the dose is from half a dram to a dram. Externally, it is a powerful resolvent, and has been recommended against pains in the side, the hyp-gout, and scrophulous tumours. The fresh root being bruised, and laid to the small of the back, has promoted urine and cured the dropsy; likewise, when it has been grasped in the hand when fresh for some time, it has been known to purge. For the hyp-gout it should be bruised, mixed with linseed oil, and laid warm to the part.

BRYONIA NIGRA VULGARIS *sen* **RACEMOSA**, *black Bryony*, has a large, thick, long, tuberosed root, black on the outside, but white within, and full of a thick sly juice, with no disagreeable taste. The stalks are like those of the vine, but without tendrils; however, they are slender, long, climbing, woody, and of a dark reddish colour, with soft, green, shining, leaves, placed alternately thereon, like those of the great bind-weed. The flowers proceed from the hollows between the leaves and the stalks, and grow in bunches; they consist of a single petal in the shape of a bell, and are divided into six segments of a yellowish green colour, some of which are barren, and others fruitful. These last sort have an embryo, which turns to an oval red berry, or of a brownish red, full of roundish seeds. Its common use is as a resolvent; for it will take off the black and blue marks of the skin arising from bruises, when it is bruised and laid thereto in the form of a cataplasim.

BUGLOSSUM, *garden Bugloss*, has a long round root, about as thick as one's finger, which is reddish or blackish without, but white within, and abounding with a clammy juice. The stalks rise to above a cubic in height,

height, which are round and beset with stiff hairs. The upper part is branched, and has leaves set thereon without pedicles; they are narrow, oblong, of a bluish green, and terminate in a sharp point, but are not wrinkled like burrage. They are hairy on both sides, and their edges are even. The flowers grow at the top of the stalks and branches, and are in the shape of a funnel, consisting only of a single petal. The flower-cup is composed of five oblong, narrow, sharp, hairy segments, and the flower consists of the same number, and is of a bluish purple colour. The pistil is oblong, and fixed in the hinder part of the flower like a nail; there are four embryos, which turn to as many seeds in the shape of vipers heads. The tops of the stalks and the cups of the flowers are purple. It is cultivated in gardens. The flowers are in the number of those that are said to be cordial, and are proper to restrain the heat of the blood, as well as to promote its circulation, according to some. The flowers may be used in the same manner as tea.

BUGULA, *Bugle*, or *middle Gansound*, has a slender, fibrous, white root, with roundish, soft, sinuated leaves, of a dark greenish colour, and two inches in length. It grows in stony places; the lower part is generally purplish, and the taste at first is sweetish, but afterwards bitterish and astringent. Some of the stalks are slender, roundish, and creep on the ground, while others rise to the height of a palm, and are quadrangular, with hair on two of the opposite sides. The flowers are placed in whorls round the stalks, and consist of a single petal, one of whose lips is divided into three parts, the middlemost of which is split in two. The place of the under lip is supplied by small teeth, with a pistil and blue apices like the flower. The flower-cup is short, hairy, and divided into five segments, from whence the pistil rises, and is fixed in the hinder part of the flower like a nail. It is attended with four embryos, that turn to as many roundish seeds shut up in a husk, which before was the flower-cup. It delights in meadows and shady places. It is a vulnerary herb, and is good in all cases where mild astringents are proper.

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BURSA PASTORIS, *Sheppard's Pouch*, has a white, strait, fibrous, slender root; with a stalk that rises to a cubit in height. The lower leaves are sometimes whole, but more generally jagged like dandelion; but those that grow on the stalks are much less broad at the base, with even edges, and terminate in a point. The flowers are placed in rows on the tops of the branches, are small, and in the form of a cross; they consist of four roundish petals with small stamina, bearing yellow apices or heads. The flower-cup consists of four leaves, and the pistil turns into a flat fruit in the shape of a heart, or as some fancy like a purse, and is a quarter of an inch long; it is divided into two cells, in which are contained exceeding small seeds. It is said to be a vulnerary, astringent, cooling herb, and is given in all hæmorrhages and fluxes; but some think it is so binding as not to be safe.

BUXUS, the *Box-tree*, is a shrub which seldom grows to any considerable size in *England*; though it has sometimes been seen as thick as a man's thigh. The largest were found in great plenty upon *Box-hill*, near *Darking* in *Surry*; but of late they have been pretty much destroyed; however, there are many still remaining, of a considerable bigness. Some have thought that the box wood, made use of by mathematical instrument makers and others, was the product of *England*; but this is a mistake, for it is brought from the *Levant* in large blocks. This shrub is an ever-green, and very bushy, having oblong, small, hard, thick, shining leaves, of a disagreeable bitterish smell and taste. The flowers are of two sorts, the barren and the fruitful: the first are without petals, and consist of many stamina, generally proceeding from the bottom of a foliated square flower-cup, of a yellowish colour; the fruitful, or rather the fruit, is shaped like a potage-pot turned upside down, and is divided into three cells of a green colour, containing two seeds, each of which when ripe is thrown out by the elasticity of the vessels; the seeds are brown, long, and shining. These shrubs are a very great ornament to cold and barren soils, where few other things will grow. They may be propagated by planting the cuttings in a shady border,

border, observing to keep them watered till they have taken root. The best season for transplanting these into nurseries is in *October*; or the seeds may be sown soon after they are ripe in a shady border, which must be duly watered in dry weather; and from these you may expect the largest trees.

There are several sorts of Box-trees, as the *common Box-tree*, the *narrow leaved*, the *striped*, the *gold edged*, the *silver beaded*, the *dwarf*, and the *dwarf striped Box*. The dwarf kind is used for bordering flower-beds, for which purpose it is excellent, as it will bear all weathers, and is kept handsome with little trouble. This is easily propagated by parting the roots, which is much better than planting the slips. It is seldom used in medicine.

CALAMINTHA, *common Calamint*, has a fibrous root, with stalks growing to the height of a palm and upwards, which are quadrangular, branched, and have leaves growing by pairs opposite to each other. They are from half an inch to an inch in length, and are roundish, obtusely acuminate, a little serrated and hairy, with an acrid taste, and a disagreeable smell. From the middle to the top, the flowers grow where the pedicle of the leaves join to the stalk in bunches; they are long and tubulous, and open at the top with two lips; the uppermost of which, or crest, is roundish, and divided into two segments; but the lowermost, or beard, is divided into three. They are of a purplish colour, and placed in a hairy streaked calyx, from whence rises a pistil fixed in the hinder part of the flower like a nail, and as it were attended with four embryos, which turn into as many light blackish seeds, whose calyx was the capsula of the flower.

Calamint (of which there are several sorts, but they differ so little from that already described, as to require no particular description) powerfully incides gross humours, excites the appetite, and discusses wind. It is taken in the manner of tea, and is generally accounted a good hysseric.

CALENDULA, *garden Marygold*, is otherwise called *Caliba Vulgaris*, and has a root divided into many thick fibres or branches; but the stalks are slender, a

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little angular, hairy, and clammy to the touch. It is divided into many branches, and the leaves are narrower at the base than at the top; they are hairy, and of a light green colour. The flowers grow on the top of the branches, and are of a gold colour and radiated; the disk consists of many tubulous florets, divided into five parts; and the crown is composed of crenated semi-florets, placed upon embryoes in a hairy flower-cup, divided into many parts. The embryoes turn into crooked margined capsulæ full of oblong seeds. It is cultivated in gardens, and, if the seeds are permitted to scatter, they will multiply greatly, and become as troublesome as weeds. The flowers are said to be aperient and dissolvent, and proper to open obstructions of the liver, spleen, and womb; but they are not very efficacious for these purposes; however, infused in wine, they will open a slight obstruction of the liver.

CAMPHORATA, *stinking ground Pink*, has a long woody root, about the thickness of a man's thumb, with many woody, thickish, branched, hairy, whitish stalks, with small knots placed alternately, from whence proceed a great many leaves, not a third of an inch in length, which are thin, hairy, pretty thick, have an aromatic smell, and when rubbed between the fingers smell pretty much like camphire. The flowers are without petals; for they consist of four stamina, with rose coloured apices, or heads, proceeding from a cup, which is only a single herbaceous leaf, divided into three, and sometimes into five, segments; from whence arises a pistil, that turns into a small, oblong, black, roundish seed, contained in a capsula, which was the calyx of the flower. It promotes urine and sweat, and is good in recent obstructions of the viscera, as well as in the moist dropsy. It may be drank as tea, but is very heating, and therefore must be used cautiously.

CANNABIS SATIVA, *matured Hemp*, has a single, white, woody, fibrous root, with a square hairy stalk, rough to the touch, and hollow within; it grows two yards high, and has a rind that may be divided into threads. The leaves consist of five segments or upwards, which are narrow and divided to the very pedicle;

pedicle; they are oblong, acuminate, serrated, veinous, rough, of a blackish green colour, and of a strong smell. The flowers and fruit do not grow upon the same plant; the former proceed from the places where the leaves join to the stalk, and have no visible petals; they consist of five stamina with yellow apices or heads, placed in a cup, composed of five leaves, purplish without, and whitish within. The fruit on other stalks are without flowers; but they have pistils contained in a membranaceous capsula of a yellowish green colour, which turn into a roundish smooth seed, covered with a thin shining shell. The plants of both kinds proceed from the same seeds, which are sown in almost all parts of the world. The use of hemp is every where well known, it being made into ropes, thread, linen, and paper.

Hemp is always sown in a deep, moist, rich soil, such as is found in *Holland*, in *Lincolnshire*, and the fens of the *Isle of Ely*, where it is cultivated to great advantage. The land should be well ploughed and rendered fine by the harrow; the latter end of *April* is the best time of sowing the seed, of which the heaviest and brightest coloured is best; when the plants come up, they should be hoed up like turnips, leaving them a foot or sixteen inches asunder; about a month after they should be hoed again, to destroy the leaves. The first season of pulling the hemp is about the latter end of *August*, and they first begin with the *finble hemp*, which is the male plant; but a fortnight or three weeks longer would be better, that none of the seeds may prove abortive. The second pulling is about the middle of *October*, when the seeds are ripe, and this is usually called *karl hemp*, they being the female plants.

Hemp seed is recommended by Sir *John Floyer*, and others, against the jaundice, for which purpose two ounces may be boiled in a quart of milk till they break; and five or six ounces of this decoction may be taken several times in a day. It is also good in coughs, and heat of urine. The oil expressed from the seeds is recommended by some to ease the pain proceeding from burns.

CAPPARIS, *the Caper-bush*, has a large woody root, from whence proceed various shoots, armed with hard sharp prickles, and on which the leaves are alternately disposed, which are almost round; half an inch broad, and very bitter. The flowers proceed from the hollows where the leaves join to the stalks, and are rosaceous, white, and consist of four petals, from whose middle arises many stamina, with a long pistil; the flower-cup consists of four green leaves, and the extreme part turns into a fruit almost in the shape of a pear; they are of the size of a large olive, and contain many small whitish seeds, almost in the shape of a kidney. In *Italy* it grows wild among the ruins of old walls and buildings, but in other places it is cultivated. There are several sorts of caper-bushes, as the *large fruited Caper without thorns*, the *prickly round leaved Caper with a small fruit*, the *sharp leaved Caper*, the *American tree Caper with a bay leaf and a long fruit*, the *American tree Caper with a bay leaf and an oval fruit*, the *American tree Caper with laurel leaves and an oblong fruit*. In *England* it is very difficult to preserve these plants, and therefore nothing need to be said about their cultivation. What we call capers are the buds of the flowers before they are opened, which at first are laid in the shade for about four hours, and then put into vinegar for eight days; after which they are taken out, lightly pressed, and put into fresh vinegar for eight days more; this is repeated a third time, and then they are put up into casks for sale. They are every where known as a sauce, and are used to excite a languid appetite. Some put them into a brass vessel to give them a finer green colour, and then they are noxious. It is not used in medicine.

CAPRIFOLIUM, *Woodbind*, or *Honey-suckle*, has a woody creeping root with large fibres; the stalks are divided into branches, and are creeping or climbing, on which the leaves grow by pairs opposite to each other; they are oblong, sharp, soft, of a light green above, and hoary beneath. The flowers grow on the tops of the branches, and in some plants are white, and in others red or yellowish; they have a very sweet smell, and consist of a single tubulated petal, which grows open
towards

towards the top, and is divided into two lips, the uppermost of which is again divided into two, and the lowermost into many segments. The tube of the flower is bent, and sometimes resemble a huntsman's horn; they are produced in clusters, and placed in a cup consisting of a single leaf; this turns to a soft fruit, or berry, of which several grow together in bunches, almost in the manner of alder-berries. They are red when ripe, and are full of hardish, roundish, flattish seeds. It is found growing in the hedges in many parts of *England*, as well as in our gardens.

CARDIACA, *Mother-wort*, has a root consisting of fibres, proceeding from one head, from whence arise quadrangular hard stalks, two or three feet high, of a reddish black colour. The leaves are veinous and wrinkled, and, tho' smooth, are covered on both sides with down. The lowermost are round and of a pale green; but they are divided into three segments, dentated about the edges. The higher they are the narrower they grow, and end in a long point, having on each side a single tooth. The cups consist of a single leaf, are hard, and divided into five stiff sharp thorns, attended with many others. The flower is labiated, and consist also of one ear, whose upper lip is imbricated, with pieces laid over each other in the manner of tiles, and is much longer than the lower lip, which is cut into three parts. The pistil rises from the flower-cup, attended with four embryoes, and is fixed in the hinder part of the flower like a nail; the embryoes turn into as many small, oblong, angular, smooth seeds, taking up the whole capsule, which was the cup of the flower. It is found wild in *England* near gardens, from whence it has been thrown out. It is said to cure convulsions, open obstructions of the viscera, and to kill worms; some account it excellent in diseases of the spleen, and the hysteric passion. The dose of the leaves in powder is a dram, and must be taken in wine.

CARDUUS BENEDICTUS, *the blessed Thistle*, has a white fibrous root, and leaves lacinated like dandelion, but deeper, hairy, and terminating in short pedicles; they are alternately placed on the stalks, which are

are villous, streaked, and sustain large flowers, consisting of florets that are divided into segments, five with a pistil cut into three or five small stamina, on which are long apices or heads adhering to each other, and as it were forming a tube. The calyx is scaly, in the shape of a pear, and armed with branched spires, as well as with large leaves in the form of a head, covered with a great deal of down; the leaves are long, streaked, yellowish and downy. The whole plant is remarkably bitter, except the root, which is milder. It is resolvent and strengthening, promotes sweat, and restrains putrefaction. It is good in weaknesses of the stomach, the moist asthma, the hooping cough, the jaundice, and in all cold diseases; but in spotted fevers and the plague, it is not so good as some authors have pretended. It has often cured agues, when used some time before the fit. In chronical diseases, the infusion of the tops may be taken several times a day. The decoction is often used to provoke vomiting, when a former emetic has failed. A slight infusion is excellent in the loss of appetite after hard drinking, and one that is stronger will occasion a plentiful sweat, and promote all the secretions in general. Some give from an ounce to two ounces and upwards of the juice, and a dram of the seeds in emulsions, which last, with distilled poppy-water, has been given with great success against the pleurisy and rheumatism.

CARDUUS MARIE, *Ladies Thistle*, has a long, thick, fibrous root, and long, broad, sinuated leaves, crenated on the edges, with many hard, shining, smooth, stiff prickles, of a light green colour, and variegated with lines or stripes of white. The stalks are about as thick as one's finger, streaked, covered with a hairy down, are branched, and two or three cubits high. The flowers grow on the heads of the branches, and consist of many purple tubulous florets, divided into five parts at the top, each of which is placed on an embryo in a scaly prickly calyx. Each embryo turns into a smooth oval seed, a little flattish, and furnished with down. It grows in uncultivated places, and by the way sides. The tender leaves, after the prickles are taken off, are eaten by some as a salad, and

and are said to have the same virtues as *carduus benedictus*. The seed is excellent for the pleurisy, rheumatism, and pains of the breast; it is given in emulsions from one dram to two.

CARYOPHYLLUS, *Clove July flowers*, or *Carnations*, have a single fibrous root, with many smooth stalks rising to a cubit in height; they are geniculated, knotty, and branched, with leaves proceeding from every knee, which are narrow like grass, pointed at the end, and of a greenish blue colour. The flowers grow on the top of each branch, and are of different colours, as is well known to all; they have a spicy smell like cloves, and the stamina and apices are white, with a pistil terminating in two or three crooked filaments; the flower-cup is scaly at the bottom, denticulated at the top, and membranaceous. The pistil turns to a cylindraceous fruit contained in the calyx, and is full of flat rough seeds, that are black when ripe. There is a great deal of difference, as well in the size and colours of the flowers, as in the number of the petals, which varieties proceed from the difference of their cultivation. They are propagated either from seeds or from layers. The seeds ought to be well chosen, and should be sown in pots or boxes about the middle of *April*, in fresh light earth, mixed with rotten cow-dung, well incorporated together, covering them about a quarter of an inch thick with the same earth. These should be placed so as to receive the morning sun only till eleven o'clock, and in a month's time they will come up, and be fit for transplantation in the middle of *June*, into beds of the same sort of earth lying in an open airy situation. They should be planted about three inches square, observing to water and shade them as the season shall require. They may remain thus till the middle of *August*, and then they should be removed to beds of the like earth, setting them at six inches distant every way, and not above four rows in a bed. When the flowers begin to blow, those that do not break their pods should be reserved to plant in borders, to preserve the seeds; those that burst their buds, and seem to have good properties, should be planted in pots; but you cannot be certain of the value of the flower

flower till the next year. These flowers were formerly greatly esteemed by physicians for their excellent virtues; but they are now of no other use with us but to make syrup, for which purpose the red should be chosen, as they have a pleasant aromatic smell.

CARUUS, *Caraway*, has a single long root, about as thick as one's thumb, with a few fibres, and an acrid aromatic taste. The stalks rise to the height of a cubit, or a cubit and a half, and are smooth streaked, and branched. The leaves are winged, narrow, conjugated, and cut into small segments, of a dark green colour. The flowers are placed in umbels, are small, rosaceous, and consist of five petals, in the shape of hearts, placed in a ring, and contained in a green cup, with very slender whitish stamina, and green apices or heads. The calyx turns to a fruit, consisting of two small longish seeds, streaked and gibbous on the one side, and on the other plain; they are blackish, acrid, and aromatic. It is sometimes found wild in *England* in rich moist pastures. There are several sorts, as the *common*, the *large seeded*, the *narrow leaved*, with *asphodel roots*, and the *alpine Caraway*. They are all to be seen in the gardens of the curious, and are cultivated by sowing their seeds in the spring of the year, in a moist rich soil. They should be hoed out to about six inches square, which will greatly strengthen them, and promote their seed plentifully. When the seeds are ripe, in autumn, the plants should be cut, and laid upon mats to dry, after which their seeds may be taken out and kept for use. They are stomachic and diuretic, and numbered among the four greater hot seeds. They incise gross humours, discuss wind, appease the cholic, and help digestion; but they are bad in very hot constitutions and inflammations. The dose, in powder, is from a scruple to a dram.

CASTANEA, the *Chestnut-tree*, is large, tall, and full of branches, and sometimes grows to a large size. The wood is solid, durable, and not obnoxious to putrefaction; it crackles in the fire, and has smooth, spotted, blackish bark, inclinable to an ash colour. The leaves are large, being about two inches broad, and four or five long; are thin, rough, wrinkled, and cut

cut on the edges, with many transverse veins on the back, which run from the rib in the middle. The male flowers, or catkins, consist of many stamina, which proceed from a green cup, composed of five leaves, and have yellow heads. They are fixed to a small capillament or axis, and are barren. The outer coat of the fruit is very rough and prickly, and grows distinct from the flowers. In each husk, or covering, there are two or three kernels or nuts, which are sometimes an inch in length, and of a roundish flat shape. This is the tree that is planted, but there is another sort, which grows wild, and differs from the former only in being less in every sense. Chestnuts are of great use in many countries, where they eat them instead of bread, especially in the mountainous parts of *France*. Some boil them, and others roast them in pans over the fire; but whatever way they are prepared, they are windy and hard of digestion; and consequently seldom agree with any, except laborious working people.

CENTAURIUM MAJUS, the greater *Centaury*, has a thick, solid, heavy root, three feet in length, and blackish without, but reddish within, with a sweetish, astringent, biting taste. The stalks are round, and rise to the height of two or three cubits, with many branches; the leaves are large, and divided into several parts, in the form of a wing. The particular leaves, of which they are made up, are near a span in length, and three or four inches broad, not unlike those of walnuts; they are smooth, serrated on the edges, full of nerves, and of a deep green colour. On the tops of the branches there are small heads or flowers, consisting of blue florets, divided into five parts, and placed upon an embryo in a scaly cup, but the scales are without points. The embryo turns to an oblong, smooth seed, furnished with down, like those of *cardus benedictus*. It grows wild among the *Alps*, from whence it is brought to us; but it is cultivated in gardens, and may be propagated either by sowing the seeds, or parting the roots, the latter of which is most commonly practised in *England*. The best seasons for this work, are *October* and *February*.

CENTAURIUM MINUS, *lesser Centaury*, has a small, white, woody, fibrous root, with a branched angular stalk, about a span in height. Some of the leaves lie on the ground, while others are placed on the stalk by pairs. The flowers grow in clusters on the top of the branches, and consist of single petals, in the shape of a funnel, and are of a beautiful reddish colour. The cup of the flower is composed of five sharp leaves, and a pistil, fixed in the lowest part of the flower, which turns to a membranaceous fruit, half an inch long, of a cylindrick shape, and full of exceeding small seeds. It grows wild upon dry arable land, and chiefly among corn. Both the flowers and leaves are extremely bitter, and the florid tops incide gross humours, strengthen the stomach, help digestion, open obstructions of the viscera, cure the jaundice, and the suppression of the piles. The dose in powder is to a dram. Outwardly, it is vulnerary, and cures recent wounds, and old ulcers.

CEPA, the *Onion*, is of several kinds, but the most usual are, the *common Onion*, the *red Spanish Onion*, the *Scallion*, and the *Ciboule*.

CEPA VULGARIS CANDIDA, the *common white Onion*, has a bulbous root, consisting of various coats, the outermost of which are membranaceous, and the innermost fleshy, with many fibres at the bottom. The leaves are long, fistulous, round, and sharp at the points; the stalk is naked, upright, and sometimes rises to the height of two or three cubits, especially in hot countries; this is likewise hollow, swells out in the middle, and the flowers are collected into a spherical head; they are composed of six petals or leaves, in the middle of which are six stamina, and a pistil, which turns into a roundish fruit, divided into three cells, full of roundish black seeds. They are propagated by seed, which should be sown in the beginning of *March*, on good rich sandy ground, and eight pounds is sufficient for a whole acre of land. About a month or six weeks after sowing, they will be ready to hoe, which should be done with one two inches and a half broad, cutting out, not only the weeds, but the onions, where they are too thick. This is best done in a dry season, and

and should be repeated twice more, cutting out the weeds as before. Towards the beginning of *August*, the onions will be at their full growth, which is known by the blades falling to the ground, and shrinking; but before they are quite withered, they should be drawn out, cropping off the extreme part of the blade, and then laying them upon a dry spot, turning them every other day for a fortnight, lest they should take root again. The *Spanish* onions are much in esteem, but will not long preserve their kind here, without fresh seeds from *Spain* or *Portugal*. They are chiefly preserved for the kitchen use, and are eaten raw by some, and roasted by others; but they are generally boiled. They are windy, heating, occasion troublesome dreams, and cause thirst; and therefore are bad for hot constitutions. However, when boiled, and mixed with honey, they are good in disorders of the lungs, arising from a thick clammy phlegm. When roasted, they are used by some to ripen boils.

CEPA ASCALONICA, *Scallions*, consist of several bulbous roots, somewhat larger than a hazel nut, have the taste of common onions, but not so strong nor so disagreeable. The leaves are slender, fistulous, round, smooth, and have the same taste. It is used in the spring, instead of green onions, in some countries, but it is now much neglected here. It is easily propagated, by parting the roots in the autumn, and then they will be ready for use in the spring. They must be planted three or four together, in a hole, at about six inches distant every way, for they multiply exceedingly. They have the same virtues as onions.

CEPULA, *see* CEPA FISSILIS, the *Ciboule*, is intirely like the Scallion, only it is larger in every sense, and differs in the acridity of its taste. They are planted for the same use as the former.

CERASUS, the *Cherry tree*, is of different kinds, as the *red garden Cherry*, the *large Spanish*, the *red heart*, the *white heart*, the *bleeding heart*, the *black*, the *May*, the *black or Mazzard*, the *arch-duke*, the *yellow Spanish*, the *Flanders cluster*, the *carnation*, the *large black*, the *rose-flowered*, and the *double-flowered Cherry*; the common *white Cherry*, the *wild northern English*, with late

ripe fruit, the rock or perfumed, the Cherry-tree with striped leaves, the amber, the morella, and the Hertfordshire duke Cherry.

CERASUS SATIVA FRUCTU ROTUNDO RUBRO ET ACIDO, *the common red or garden Cherry,* is a tree that is neither tall nor strait, which consists of a great many brittle boughs, with a moderately thick trunk, covered with a reddish bark, and the heart is of a blackish colour, but the sap is whitish. The leaves are large, oblong, shining, and crenated on the edges. The flowers are rosaceous, consisting of several white petals, with stamina of the same colour; the flower-cup is divided into five crooked segments, from whence arises a pistil, that turns to a well known fruit, with long slender pedicles. It produces a yellowish shining gum, without taste or smell.

The large *Spanish* CHERRY grows on a tree not much unlike the former, but it is not so high, and therefore the sooner bears fruit. The stalk or pedicle is shorter and thicker than in the other kinds. Both these are cooling; and, boiled in water, with a little sugar, make a pleasant drink for persons of hot constitutions; but those that have a weak stomach, abounding with acid humours, ought to abstain from them.

Heart CHERRIES are so called from being shaped somewhat like a heart, and the trees have larger leaves than the common sort; for they are somewhat like those of the chestnut tree, and hang downwards. The fruit has a harder and sweeter flesh, and are consequently more wholesome. All sorts of cherries are propagated by budding, or grafting the several kinds into the stocks of the black or wild red Cherries. The stones of these two kinds are sown in beds of light sandy earth, in autumn, and when they rise, they must be carefully weeded. They should remain in these nursery-beds till the second autumn after sowing, at which time you should prepare an open spot of good fresh earth, into which you should plant out the young stocks, at three feet distance from row to row, and about a foot asunder in the rows. The second year after they are planted out, they will be fit to bud,

bud, if intended for dwarfs; but if for standards, they will not be tall enough till the fourth year; for they should be budded or grafted near six feet from the ground.

CERASUS NIGRA, *the black Cherry-tree*, is tall, with an upright trunk, and covered with a smooth, spotted, ash coloured bark, that is greenish on the inside. The leaves are oblong, shining, and deeply crenated. The flowers are joined together, as it were in a sheath, with slender long pedicles or stalks, from which proceed round, small, sweet fruit, with somewhat of bitterness. It is not now kept in the shops; but it is common to steep them in brandy for a dram, which is known by the name of cherry brandy.

CHÆREFOLIUM, *Chervil*, has a single white fibrous root, with a stalk rising to a cubit and a half high, which is brown, streaked, hollow, geniculated, smooth, and branched. The leaves are like those of hemlock, but less, and they, as well as the pedicles or foot stalks, are of a faint reddish colour, and a little hairy. The flowers grow in umbels on the tops of the stalks, and are rosaceous, consisting of five white unequal petals, in the shape of a heart, with as many white stamina, and a flower-cup, that changes into two oblong seeds, gibbous on one side, and flat on the other, which are black when ripe, and in shape like the bill of a bird. It is planted in gardens for sallads, by sowing the seeds in autumn, soon after they are ripe, or very early in the spring. If it be suffered to sow itself, it will thrive better than when cultivated by art. It is said to be inciding, attenuant, and aperient. It promotes urine so much, that *Geoffroy* takes it to be a specific against the dropsy, and he affirms, if chervil will not cure it, he does not know what will. The juice should be expressed from the fresh herb, or put in an earthen pan, and exposed to a violent heat, after which the juice is to be expressed out. The dose is three or four ounces, every third or fourth hour; or a decoction may be made of it with water, and then five or six ounces is a dose.

CHAMÆDRYS, *Germander*, or *ground Oak*, has fibrous creeping roots, with quadrangular stalks, that

are branched and hairy, on which the leaves are set by pairs, and are of a beautiful green; they are half an inch long, and near a quarter broad, with a narrow base, and crenated from the middle to the end. The flowers arise from the places where the leaves join to the stalk, and consist of a purplish, labiated, single leaf; but the upper lip is wanting, and in its place there are crooked stamina, with a forked pistil. The beard, or lower lip, is divided into five parts, and the middle segment, which is largest, is hollow like a spoon, and sometimes divided into five segments, containing four roundish seeds, that proceed from the pistil. Both the leaves and flowers are in use, and grow wild in many parts of *England*. The leaves are bitter, and a little aromatic; they incide gross humours, restore the tone of the solids, and promote urine and sweat.

CHAMÆMELUM, *Camomile*, has a slender fibrous root, and slender branches, divided into many wings, which are eight inches high or higher. The leaves are slender, and cut into five segments; the flowers grow at the top of the stalks, and are for the most part radiated with white petals, and a yellow disk, which consists of many yellow florets; but the crown is composed of white semi-florets, and placed upon embryoes, comprehended in a scaly cup. These turn into slender, oblong, naked seeds. The whole plant has a physical smell, which is not disagreeable. It grows wild in great plenty, on most of the large heaths near *London*, and is propagated for use, in physic gardens, by parting the roots, and planting them about eight or ten inches distant, every way, for they spread greatly. The proper time is in *March*, and they thrive best in a poor soil.

CHAMÆMELUM FOETIDUM, *five* **COTULA FOETIDA**, *stinking Camomile*, has a fibrous root, with round, greenish, brittle, succulent stalks, divided into many wings. It is thicker and higher than common camomile, with larger leaves, of a blackish green colour; but the flowers are much the same. It is easily known by its strong smell. The floret tops, and the leaves of both, are in use, but more particularly the flowers. Common camomile

camomile is an excellent carminative, and powerfully discusses wind, curing the cholic proceeding from thence, as well as in the convulsive cholic. They are also good in diseases of the breast, and more particularly in tumours of the stomach, proceeding from a violent heart-burn; as also in pains of the gravel. Externally, they are emollient and discutient, and are excellent in bruises, to disperse coagulated blood. Hence they are used in fomentations, cataplasms, pargoric glisters, uterine injections, and baths. The common method of taking them is as tea.

CHAMÆPITYS, *ground Pine*, has a slender, fibrous, white root, with stalks partly upright, and partly lying on the ground. They are villous, nine inches high, and two leaves proceed from every knot, an inch in length, and are somewhat in shape like those of the pine tree, from whence it has its name; they are of a yellowish green. The flowers proceed from the places where the leaves join to the stalk, and have only a single petal, and a single lip; they are of a yellowish colour, and the lower lip is divided into three segments, the middlemost of which is parted in two. In the room of the upper lip, there are a few teeth, with stamina, of a light purplish colour. The flower-cup is villous, divided into five segments, and contains four triangular brown seeds. The whole herb is in use, and has a pitchy or turpentine smell.

CHAMÆPITYS MOSCHATA, *Musk ground Pine*, creeps on the ground like the former, but the stalks are harder. It has the same sort of flower, but of a purple colour, and the seeds are black, curled, and longish. The whole herb is very hairy, with a bitter taste, and a strong resinous smell, with somewhat of the scent of musk. These are numbered among the vulnerary, aperient, cephalic, hysteric, and nervine plants. The dose of the powder is a dram, either alone, or with that of germander, in red wine; but it may be boiled in whey, when wine is not proper, and the decoction drank every morning.

CHEIRI, the *Wall-flower*, has a flower composed of four yellow petals, which are placed in the form

of a cross, and out of the flower-cup rises the pistil, which becomes a long flat pod, divided by a partition, into two cells, to which the valves adhere on both sides, and are furnished with smooth round seeds, with borders round their edges. The leaves are green, and acuminate at the end. It grows upon old walls, and flowers in *June*. They are said to be cordial, to ease pains, and to be good in the apoplexy and palsy.

CHELIDONIUM, *Celandine*, has a fibrous hairy root, and the lower leaves are large, a span long, lobated, of a fine green above, but of a bluish green below, and a little hairy. The lobes are roundish, have ears, and are placed one against another; they have also large veins and incisures. The stalks rise to a cubit in height, and upwards, are knotty, brittle, fistulous, and branched with leaves alternately placed. From the places where they join to the stalks at the top, flowers proceed, with a pedicle, a palm in length, and flowers collected in umbels. The flowers consist of four gold coloured petals, placed in the form of a cross, and the calyx consists of two leaves, which soon fall off. The pistil of the flowers turns to a pod, an inch and a half long, which is round, slender, bivalved, and a little wrinkled; it is at first green, afterwards reddish, and pours out black, shining, roundish, flat seeds. The whole plant has a strong smell, and wherever it is wounded, pours out a liquor of a saffron colour, which is acrid and biting. It delights in watery shady places, and may be propagated, by sowing the ripe seeds in any corner of the garden. The colour of the root is red, and it is full of a bitter, acrid, burning juice. Some have given it inwardly, to open obstructions, to promote urine and sweat, and to cure the dropsy; but others think it not safe for inward use, for in some cases, an infusion of two ounces of the root has been attended with dreadful symptoms. It is common to rub warts with the juice, to take them away.

CHELIDONIUM MINUS, *Pile-wort*, has a root consisting of tubercles, of the size of a grain of wheat, with many slender whitish fibres, which are pale without,

out, but white within. The stalks rise to a palm in height, are slender, and most of them lie on the ground; the leaves are roundish, smooth, and shining, like those of ivy; and on the top of the stalks there is a rosaceous flower, like a ranunculus, consisting of eight or nine petals of a gold colour, placed in a circle. There are many saffron-coloured stamina in the middle, placed in a cup, consisting of three leaves. The pistil is placed in the middle of the flower, and turns to a roundish prickly fruit, of a greenish yellow colour. It grows in meadows, and by the sides of high ways. The leaves are without acrimony; but the roots are said to cool and moisten. It is looked upon as an antiscorbutic plant, and the fresh leaves are eaten in some places as a salad.

CICORIUM, *wild Succory*, has a root a foot in length, and about as thick as a man's thumb, with a few fibres, and full of a milky juice. The stalk is strong, hairy, branched, and grows to a cubit and a half high, with leaves like those of dandelion, but larger, and they are hairy, and of a dark green colour. The flowers consist of many blueish semi-florets, placed upon an embryo, contained in a calyx, which being contracted, turns to a capsula, full of angular, naked, short seeds. The leaves and roots are bitter, and it not only grows wild, but is planted in gardens, and flowers in *June*. The fruit, leaves, and flowers, are in use, but the wild is better than the garden succory. Some use it as a salad, when young. It is accounted good to resolve thick clammy humours, and to strengthen the solid parts, as well as to temperate the hot intemperies of the viscera; for which reason, it has been given in recent obstructions of the liver, and against the jaundice. The juice taken in large quantities, so as to keep up a gentle diarrhæa, and continued for some weeks, has been found to be excellent against the scurvy, and other chronical disorders. The dose of the juice is four ounces.

CICUTA, *Hemlock*, has a root a foot in length, and as thick as ones finger, and before the stalks are produced, solid, and before they are grown, fungous. The stalk is streaked, fistulous, smooth, and grows to

the height of three cubits and upwards; some are greenish, others reddish, and others again spotted like serpents. The winged leaves are cut into many minute segments, and nearly resemble those of parsley, for which it has been often taken while young. The flowers are collected in umbels, on the top of the stalks, and are rosaceous, consisting of five white petals, in the shape of hearts. The calyx turns to a globous fruit, containing two small seeds, gibbous on one side, and streaked on the other; and of a palish green colour. The whole plant has a disagreeable strong smell. We have several histories both of its good and bad effects, which render it probable, it was not the same plant that was eaten. We shall take no notice of the properties ascribed to this plant by Dr. Stork; for, though we greatly admire that gentleman, and believe what he says respecting *Hemlock*, and its effects in *Germany*, yet we have the mortification to find it does not produce the same effects in *England*. Outwardly it is sometimes applied to hard and scrophulous tumours, and to reduce the size of women's breasts, when they are grown too large; as also to keep back the milk in those that do not give suck.

CINARA HORTENSIS, the *Artichock*, has a thick strong root, with leaves a foot, or a foot and a half in length, divided into several broad segments, beset with a hairy down. At the top of each branch there is a turbinated head, surrounded with large acuminate scales, which are fleshy, and of a blueish green colour, and are very thick at the bottom. The scaly head or calyx being taken off, there are seen underneath flowers, consisting of many florets, of an elegant greenish purple, which are divided into five parts, and placed upon embryoes, each of which turns to an oblong swelling seed, covered with a smooth ash coloured rind, and furnished with long down. The lower part of the cup, or placenta, is fleshy, and is the part which is eaten.

CARDONES, the *spiny Artichock*, differs in nothing from the former, but in having prickles at all the corners of the leaves and flower-cup.





Citron Tree.

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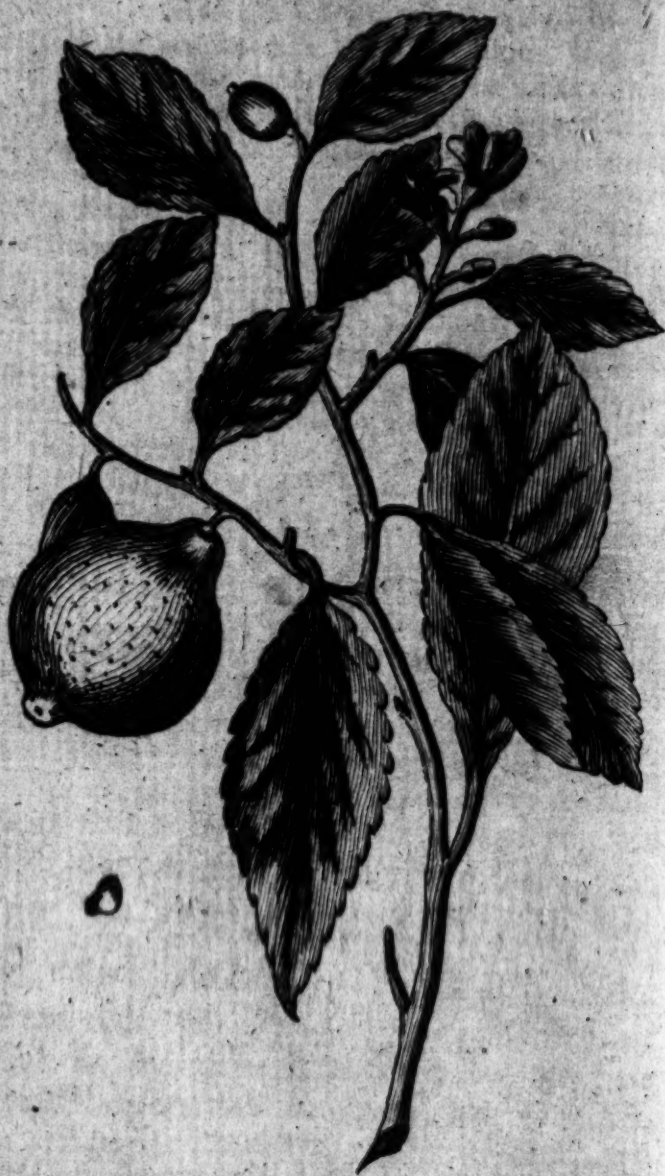
The manner of propagating the first sort, is from slips or suckers, taken from the old roots in *March*, which, if planted in a good soil, will produce large fair fruit in the autumn following. The prickly artichok, or chardon, is propagated by seed in the middle of *March*, which should be sown in an open bed of light rich earth. When the plants appear above ground, they should be carefully weeded, and in dry weather often watered. In the middle of *May*, they will be fit to transplant into beds of light rich earth, placing them in rows a foot asunder, eight inches distant from each other, observing to water them constantly, till they have taken root. In the beginning of *July*, they will be strong enough to plant out for good, in a spot of light rich ground, placing them in rows of four feet distant each way, observing to water them constantly as before, till they have taken root. In *August* they will be fit to tie up with hay bands, in a dry day, bringing the leaves as close together as possible, without bruising them. Then with a spade the earth must be banked up round the plants, leaving about ten inches, or a foot of the tops uncovered, taking care that the earth does not get into the middle. As the plants advance in height, they must be earthed up from time to time; for, if they thrive kindly, they will grow to the height of four feet, and will, when taken up for use, be near three feet, when trimmed of their outer leaves; for the tender branched part is only valuable. This by some is accounted a great delicacy.

Some eat the flesh of the smooth Artichokes with salt and pepper, they being thought proper to help digestion. As for their physical uses, they are not said to have any, only the roots are commended to promote urine.

CITREUM CITRUM, *frus* MALUS MEDICA.
The *Citron tree* is called **MALUS MEDICA**, because it was first brought into *Europe* from *Media*; it is of a moderate height, with a branched spreading root, yellowish without, and whitish within. The trunk is slender, the wood white and hard, and the bark of a pale green. The boughs are numerous, long, slender

and tough, and the oldest of them are of a light yellowish green, and armed with pale prickles; but those that are more recent, are of a beautiful green. The tops of the branches are tender, and of a brownish red green, as well as the leaves, which are of the size of those of the walnut-tree, generally blunt, but now and then acuminate, and they are three times as long as they are broad; the lower part is not so green as the upper, and the edges are a little serrated. The tree is always clothed with them, both winter and summer, and when they are held up against the sun, they appear to have holes in them, like St. John's wort, or rather full of transparent specks. The flowers grow on the tops of the branches, and are rosaceous, with fleshy petals, which are generally five in number, and stand almost upright; without they have a reddish blush, but are white within, and placed in a ring. The calyx is small, and divided into five segments, and under the yellow apex there are a great many stamina, and part of the flowers are fruitful, and part barren. Among the stamina there is a longish pistil, the rudiment of the fruit, and those flowers that are without never produce any. The shape of the fruit is oblong, but sometimes globous, and some terminate in a point, while others are blunt; the surface is wrinkled and tuberose, and is often nine inches in length, and upwards. The size is different, as well as the weight; for some weigh six, nine, and even thirty pounds. The outer rind is tough, thin, bitter, and hot, and the colour is at first green, which turns to that of gold, when ripe; the inner or white rind is thick, firm, sweetish, with a little acidity. Within it is divided into several cells, full of an acid juice; the seeds are numerous, for sometimes an hundred and fifty have been found therein; they are oblong, half an inch in length, and sharp at both ends; they are bitter, yellow without, covered with a streaked skin, and contain a double white kernel. In hot countries both flowers and fruit may be seen on the tree at the same time, as well in the spring as the autumn; but they are more plentiful in the last.





The Lemon Tree.

CITRONS are not used as an aliment, but as a sauce, and are cut into small slices, as we do lemons, to garnish the dishes, and to squeeze upon the meat. The acid is very agreeable, excites a weak appetite, and helps digestion, when used moderately. The outward rind, on account of its hardness, is not easy of digestion. It is an excellent remedy against the scurvy, and is a kind of specific to cure that disease, as well as the juice of oranges and lemons; when the gums of patients, afflicted with that disease, are ulcerated, this juice will cure them. The juice is also good in burning and malignant fevers, to quench thirst, and to restrain the heat and effervescence of the blood. Besides, the juice of citrons is diuretic, cleanses the kidneys of small gravel, and restrains vomiting, proceeding from bilious humours. The flowers, as well as the leaves, have an exceeding fine refreshing smell, though they will not prevent contagion on this account, as some pretend. The outer yellow bark has also a very fine aromatic smell, because it has a prodigious number of vesicles full of essential oil. Being chewed, it mends the breath, and by its bitterness strengthens the stomach; it powerfully discusses wind, and concocts crude humours in the stomach and intestines. However, the juice is not good in the pleurisy, inflammation of the lungs, spitting of blood, a consumption, and the like.

MALUS LIMONIA, the *Lemon tree*, is placed here on account of its affinity with the former, and is pretty tall, though not very full of branches; the leaves are like those of the citron tree, but shorter, and the prickles are more numerous, but less, and venomous. The flowers have much the same smell, and the shape of the fruit is likewise oval, but shorter, and not of so deep a yellow. Likewise, the rind is thinner, and they are much more full of juice, which is more acid than that of citrons. Upon which account it is thought to be more cooling, and more efficacious in hot diseases; in short, what has been said of the juice of citrons, may in most respects be applied to this.

COCHLEA

COCHLEARIA HORTENSIS, *garden Scurvy-grass*, has a white thickish strait fibrous and hairy root, with many roundish leaves, of a deep green colour, about an inch in length, which are hollow, almost like a spoon; they are thick, full of juice, and placed upon pedicles, a palm in length. The stalks are branched, upright, smooth, a cubit in height, and have leaves that are more jagged than those next the root; they are also longer, and without pedicles. The flowers have four petals, which are white, and in the form of a cross, with a calyx, consisting of four leaves, and a pistil that turns to a membranaceous round fruit, the sixth part of an inch in length, and composed of two cells, full of small, round, reddish seeds. But a distinction ought to be made between the garden and sea scurvy-grass; for the leaves of the former are always roundish, and of the latter sinuous. It is propagated by sowing the seeds at the latter end of *July*, soon after they are ripe, in a moist shady spot of ground. When the plants are come up, they should be thinned so, as to be left at four inches distance each way, and in the spring they will be fit for use; for those that are suffered to remain will run up to seed in *May*. They must be sown every year.

This plant has its *English* name from its virtue in curing the scurvy, against which it is accounted a specific. In some parts of *England* they brew an ale therewith, which is recommended by many to cure the same distemper. However, it is more effectual when mixed with sorrel, or some such acid herb, because of itself it is too hot, and if used too freely, will produce bad symptoms. The people that inhabit cold countries are not ignorant of this mixture, for they have learnt by long experience, that scurvy-grass, and sorrel together, make an excellent remedy against this disease. Scurvy-grass is not useless in other diseases; for it is excellent in recent obstructions of the viscera, in the green sickness, and some sort of asthma; but the dried leaves are not near so valuable as the fresh. The dose of the leaves, in decoction, is from a pugil to a handful, and of the juice from one ounce to three. Externally it is good in scorbutic disorders

disorders of the mouth, in the bloody swelling of the gums, and to fasten loose teeth, the gums being rubbed with the juice, or held in the mouth as a gargle.

COLCHICUM, *meadow Saffron*, whose flowers appear, near the beginning of autumn, before there are any leaves. These flowers consist of a single petal, which proceed from the root itself, and are in the form of a very small white tube, divided into six segments. They are somewhat like the florets of saffron, but of a lighter colour, with internal stamina, of a pale yellow, and a pistil arising from the bottom of the flower, and terminating in slender hairs. In a day or two's time they begin to wither; but in the following spring, three or four oblong, broad, smooth, flat leaves, shoot out, like those of the white lily. Between these are seen three or four thick, oblong, triangular bladders, like pods, divided into three cells, which open when they are ripe, and are full of a reddish, black, roundish seed. The root is bulbous, turbinated, but flat on one side, on which is a furrow, when in flower, that does not appear at any other time. It is covered with a blackish coat, and has a few fibres at the bottom. The bulb itself is fleshy, white, and when fresh, it pours out a milky juice as soon as taken out of the ground; but when it is dried, it is blackish without, reddish within, and of a sweetish taste, with a little bitterness. The smell of the whole plant is strong and nauseous. Both ancients and moderns agree, that the root is poisonous, and those that eat it feel an itching all over the body, with a biting pain of the internal parts, and of the stomach, with great heat, which afterwards turns to a bloody flux.

CONSOLIDA MAJOR, the *greater Camfrey*, has thick fleshy roots, divided into several parts, black without, but white and clammy within. The stalks grow to the height of a cubit and a half, and are light, hairy, rough, and winged. The leaves are two spans in length, and a palm in breadth; they are of a dark green, rough, hairy, and sharp at the point. The flowers grow at the top of the branches,
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and are placed in elegant rows, and before they open are rolled up like the tail of a scorpion; they are pendulous, consist of one flower, in the shape of an oblong funnel, and are of a whitish or purplish colour; they are a quarter of an inch in length, and slightly divided into five segments; the cup is also divided into five parts, and has a long pistil of the same colour with the flower, which turns into four seeds, that are black and shining, and resemble vipers heads. It grows wild on the sides of banks and rivers, in several parts of *England*, and may be propagated by sowing the seed, or parting the roots in autumn, which is best. They should be planted about eighteen inches asunder, that they may have room to spread. The root is only in use, and has the same qualities as that of marsh-mallows. The dose of it in powder is to a dram, and in decoction or infusion to an ounce. It is commended in ulcers of the lungs, and other disorders that proceed from the acrimony of the humours.

CORIANDRUM, *Carvander*, has a slender, white, single root, with a few fibres; as also a single, slender, round, smooth stalk, full of pith, that is branched, and rises to the height of a cubit and a half. The lower leaves are broad, and conjugated, but the upper are deeply cut into five segments; the flowers grow in umbels, at the top of the branches, and are rosaceous, and of a whitish purple colour; they consist of five petals, in the shape of a heart, with a calyx that turns to two seeds, that, when together, make up a whole sphere; they are green at first, but afterwards of a palish yellow. The smell of the whole plant is strong and aromatic; but that of the seeds becomes more mild, and they have a sweet agreeable taste. This plant is propagated by sowing the seeds early in the spring, in an open situation, and in a bed of good fresh earth; when the plants are come up, they should be hoed out to about four inches every way. The seeds have a carminative virtue, and are good against catarrhs, flatulencies, worms, the cachexy, and slight obstructions of the glands. The dose of the seed, in powder, is from a scruple to a dram.

COTONEA

COTONEA MALUS, the *Quince tree*, is of several kinds, as the *Pear Quince*, the *Apple Quince*, the *Portugal Quince*, the *Quince tree*, with oblong, smooth, sweet fruit, the *Quince tree* with lesser oblong, downy fruit, which are not eatable, and the common *Quince tree*, with narrow leaves.

It is a dwarf tree, with a branched root, and is covered with a brown bark; it is sometimes strait, and has many slender branches on the top. The leaves are roundish pointed, and of the size of those of the apple tree; they are not cut on the edges, and on the lower part they are covered with a soft down, but on the upper they are greenish and smooth. The flowers grow single, and are rosaceous like the wild rose, consisting of five roundish petals, half an inch broad, and of a flesh colour; in the middle there are many purple stamina, with yellow apices, and the flower-cup is composed of five greenish, hoary, villous leaves, which, when the fruit is grown, appears at the top thereof. The fruit is of different shapes, which have been above taken notice of, the seeds are in the middle of the quince, and are like those of pears; but they are rendered slippery by a sort of slime that covers them. When quinces are unripe, they are seldom or never eaten, especially raw; but when they are boiled, they are very well liked by some. They are greatly astringent, strengthen the stomach, and may be of some use in all sorts of fluxes. The use of quinces is very well known for the making of marmalade; the seeds are so mucilaginous, that an ounce of them will render three pints of water thick and ropy, like the white of an egg. A spoonful of the marmalade is good in coughs, for it incides clammy phlegm, and causes expectoration; and it is the more valuable, because those that refuse other medicines will take this.

CUCUMIS SATIVUS VULGARIS, the common *Cucumber*, has strait roots, with many white fibres, and thick, long, branched, hairy stalks, creeping on the ground, on which are leaves alternately disposed, a palm or two in breadth, serrated on the edges, and rough to the touch. They are furnished with clasps, and the flowers proceed from the places where the leaves

leaves join to the stalks, which are in the form of a bell, divided into five segments, and half an inch in length. They are of a pale yellow, and some are fruitful, others barren; the fruitful have an embryo, which turns to a fruit that is sometimes six inches long, and is extremely well known. The seeds only are in use, and are reckoned among the four greater cold seeds. As for the flesh or pulp, it is unfit for nourishment, and is generally offensive to the stomach, especially if not corrected with a good deal of pepper, as well as vinegar. However, they agree extremely well with some who eat them frequently, without any bad consequence. The seeds are cooling, and sometimes emulsions of them have been prescribed in burning fevers, a fit of the gravel, and heat of urine.

CUCUMIS AGRESTIS, *wild Cucumber*, has a root two or three inches thick, and divided at the bottom into various fibres; it is white, fleshy, and has a bitterish and nauseous taste. The stalks lie on the ground, and are rough, thick, and furnished with leaves above a palm in length, that are roundish, acuminate, and have ears at the base. The flowers proceed from the hollows where they join to the stalk, and consist of a single petal in the shape of a bell, which is deeply divided into five parts, and is of a yellowish colour with greenish veins. The fruit grows to two inches in length, is in the shape of a cylinder, and covered over with rough studs. It is divided into three cells full of a bitter juice, and when ripe, they pour it out upon the slightest touch in a violent manner with the slippery seeds, which are broad, smooth, and blackish. It grows in the southern parts of *France*, near the highways and among rubbish, and is also planted in gardens, not only for variety, but for diversion upon the above-mentioned account. It may be propagated by sowing the seeds in the spring in an open warm border; and, when the plants are come up, they should be transplanted into an open bed, about six or eight feet distant, because they creep very far. The fruit is ripe in autumn, and the seeds will sow themselves without any farther trouble. *Elaterium* is made of the juice of the ripe fruit, and is a most violent purge, and particularly

particularly evacuates serous humours both upwards and downwards; for which reason some prescribe it in a dropy, and give half a grain at first, and afterwards from two or three to five; however, it should be exhibited very cautiously.

CUCURBITA, *the Gourd*, has stalks as thick as one's finger, that run along the ground, or climb by the help of claspers; the leaves are round, and are from a foot to a foot and a half broad, and covered with a down, as well as a little crenated at the edges. The flowers proceed from the hollows where the leaves join to the stalk, are white, and in the shape of bells; they are cut into five segments, but so deep that they seem to be so many petals. Some of the flowers are barren, others fruitful, which last have an embryo that turns into a fruit, which is sometimes two yards long; but this is very rare. It has a thick neck and a moderate belly; and, when ripe, has a hard rind, of a yellowish colour, with a white tasteless pulp, or flesh, that is pretty spongy. It is divided into five cells, containing oblong flat seeds, almost an inch in length; but have sometimes a border round them. There are four sorts, namely, the *Long Gourd*, with a soft leaf and a white flower; the *fickle shaped Gourd*, with a soft leaf and a white flower; the *flat Gourd*, with a soft leaf and a white flower, commonly called *Squashes*; the *bottle shaped Gourd*, with a soft leaf and white flower. There are several other varieties every year brought from *America*; but the seeds will not produce fruit of the same shape for two years together. They may be all propagated by sowing the seeds on a hot bed; when the plants are come up, they should be removed to a moderate bed; and when they have got four or five leaves, they should be transplanted into holes made upon an old dunghill; but they should be allowed a great deal of room to creep, because some have run forty feet from the holes; and if the side branches were permitted to remain, they would overspread twenty rods of ground. The seeds are numbered among the four greater cold seeds, and emulsions made therewith temperate the acrimony of the urine, and often procure rest.

CUPRESSUS, the *Cypress tree*, is of five kinds, namely, the common *Cypress-tree*, the male spreading *Cypress*, the *Virginian Cypress*, with leaves like *Acacia*, that fall off in winter, the spreading *Portugal Cypress* with smaller fruit, and the *American Cypress* with the least fruit, commonly called *white Cedar* in *America*. The first sort has a strait thick trunk, palish, and sometimes reddish, and a very sweet smell. The male has a spreading top, but in the female it is collected as it were into a point. It is an ever-green, and the leaves are like those of *savine*, the shoots being very small, and seemingly covered with scales. The catkins consist of very small leaves, or scales, and under them are apices that pour out an extremely fine powder; the fruit grows on other parts of the tree; this is roundish, and composed of many woody tubercles; and in the clefts between them there are reddish, hard, angular seeds, round at one end and sharp at the other. It is very common in many of the old gardens in *England*; but at present is not much in request, though for what reason is hard to say. These trees are all propagated from seeds, which should be sown early in the spring, on a bed of warm, dry, sandy earth, sifting the same earth over them to half an inch thick; in a month's time the young plants will appear above ground, and should be often watered in dry weather. In two years time they will be strong enough for transplantation into a nursery, and the best season is the middle of *April*, in a cloudy day, at the distance of eighteen inches in rows, observing to close the earth well to their roots. They may remain here three or four years; and when they are planted out for good, it should be at the distance of twenty feet every way, taking care not to shake the earth from the roots.

CYANUS, *Blue-bottle*, has a woody fibrous root, and stalks that sometimes rise to the height of a cubit and a half, which are angular, hollow, covered with down, and branched. The lower leaves are sinuated, not much unlike those of *dandelion*; but the rest are narrow and long, with a single nerve running through the whole length. The flower has a scaly hairy cup, and the disk is almost flat, but the outer florets round the

the border are large, tubulous, and deeply cut; the inner florets are less, and the colour of them all is generally blue, though sometimes they are of other colours. The first are always barren, but the others are succeeded by a single naked seed. It increases greatly by its creeping root, and is only fit for large borders under trees, or in wildernesses, because it will overspread the plants that grow near it. They are propagated by taking off sets from the old roots, either in spring or autumn, and will grow in any soil or situation.

CYCLAMEN, *Sow-bread*, has a thick, globular, fleshy root, but somewhat flattish, white within, and blackish without. It has a pungent, burning, disagreeable taste, and from it proceed leaves that are almost round, growing on pedicles a palm in length; they are pretty much like those of cuckow-pint, but not so thick, and are of a blackish green above, with white spots; but below they are purplish, and a little sinuated on the edges. The flowers have long tender pedicles, and consist of a single globous petal divided into five or six segments, that turn down almost to the bottom; they are sometimes of a light, and sometimes of a dark purplish colour, with a sweet smell; the pistil is fixed in the hinder part of the flower, like a nail, and when the flower falls off it curls and bends down to the ground, where it turns to a globous membranaceous fruit, full of oblong angular seeds, adhering to a placenta. These being sown always turn to a root, from whence the leaves afterwards proceed; but it does not flower till autumn, and then it is before they have any leaves. There are several sorts, and particularly one with a white flower; they are both propagated by sowing the seeds soon after they are ripe, in tubs of fresh earth, and in four or five years time they will begin to flower. At first the roots are small, and will produce but few flowers; but they will grow to upwards of fourteen inches in diameter, and then they will produce above an hundred flowers. When the root is dried it will lose its acrid taste, and yet it will continue to be a violent purge. Country people will take a dram of it in powder, and half an ounce in decoction; but the internal use of it is not very safe.

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However, outwardly, it is recommended against hard scirrhus and scrophulous tumours, when applied in the form of a cataplasm.

DAUCUS CRETICUS, *the candy Carrot*, has a long root, about as thick as a man's finger, and has a taste somewhat like a parsnip; the stalk, which is round, streaked, and hairy, grows to the height of about nine inches, on which there are downy ash coloured leaves, divided into narrow segments; however, they are sometimes smooth, and of a blackish green colour. The flowers grow in umbels at the top of the stalks, and are small, rosaceous, and consist of five white petals, whose calyx turns to a fruit composed of two oblong streaked seeds, that are gibbous on one side and flat on the other; they are hairy, and in shape resemble lice.

DENS LEONIS, *Dandelion*, has a root as thick as one's little finger, and the leaves are oblong, acuminate, and lactescent, with deep incisions on the edges like wild succory, but are smoother, and lie on the ground. It has no stalk, and the pedicles are naked, fistulous, round, and above a palm in length; though there is sometimes a little hair, which comes readily off; on these the flowers are placed, which consist of many petals that open in the form of a marygold, and are of a yellow colour. The cup of the flower is smooth and divided into many parts, without which there are four or five green leaves that turn backwards; the semi-florets in the middle have each their proper embryo, and turn to a reddish or citron coloured seed, furnished with long hairy down. It is accounted an aperient, and to open the obstructions of the viscera. *Beerhaave* is of opinion, that, when it is used for a considerable time, it will dissolve almost all kinds of coagulations, and open the most obstinate obstructions of the viscera.

DIGITALIS, *Foxglove*, has many slender fibrous roots, with a stalk that sometimes grows to two cubits in height; it is thick, angular, hairy, reddish, and hollow, with oblong, acuminate, hairy leaves, serrated on the edges, of a blackish green above, and hoary below. Those at the root have long pedicles, and those

at the stalks are placed without any regular order. The flowers are disposed in a long spike, and always pendulous, growing on one side of the stalk, with short hairy pedicles; they consist of a single petal, and somewhat resemble the finger of a glove, from whence it has its name; but it is open at the top, and has, as it were, a lip on each side; it is of a purple colour, excepting the lower part, where it is whitish or flesh coloured. In the lower part of the flower there are purple or white crooked stamina, with apices of a saffron colour. The pistil is slender, purplish, fixed in the back part of the flower, like a nail, and turns to a fruit, or pod, which ends in a point and opens in the middle, it being divided into two cells full of small, angular, reddish seeds; the cup of the flower is generally composed of five leaves. This plant is by many thought to be poisonous, and yet there are country people who give it as a purge in agues; but it works very violently. Some recommend it externally against scrophulous swellings, and for that purpose set the flowers in the sun in *May* butter, in order to extract their virtues, and this is used as an ointment; but it must be continued a long while.

DRACUNCULUS, *five* **DRACONTIUM**, *Dragon*, or *the many leaved Arum*, has a root that lies deep in the earth, which is almost of an orbicular form, and fills the palm of the hand, with many white capillaments and a yellow rind. The stalk is single, strait, and thicker than one's thumb; it grows to a cubit and a half high, and is round, smooth, and of several colours, like the skin of a serpent. The leaves have pedicles nine inches in length, and are divided into digitated segments, which are six or seven in number or upwards; they are oblong, narrow, smooth, shining, and there are shafts not so thick as a man's little finger, and at the top there is a vagina, or sheath, a foot long, of an herbaceous colour without, but within of a reddish purple; when it is unfolded, it turns to a flower with a single petal, in shape like an ass's ear, within which there is a blackish, long, thick pistil, bigger than that of *arum*, and ends in a sharp point; at the base there are a collection of several apices and
embryo.

embryoes, each of which turns into a globous juicy berry, disposed like a bunch of grapes, and are all at first green, and afterwards red; they contain a hard seed or two that are somewhat wrinkled. The berries have a hot biting taste. It is cultivated in gardens, and is propagated by the knobby roots, which in two or three years time will afford many off-sets. The best season for transplanting them is in autumn, after the decay of the leaves; they should be set in an open place and in a light soil. The root and leaves have the same virtues as arum, and are said to dissolve gross humours in the lungs and viscera, to open obstructions, and promote urine. The dose of the dried root, in powder, is from one dram to two. Externally, the root is an excellent remedy against inveterate ulcers; but the fruit is more powerful than the leaves or root.

DRACUNCULUS PRATENSIS, *meadow Dragon*, sometimes grows to three cubits in height, and has a crooked geniculated root, furnished with large long fibres; the stalk is round, smooth, fistulous, slender, and yet pretty stiff. The leaves are placed in no regular order; they are serrated with sharp rough teeth on the edges, and are of a blackish green shining colour, of a hot taste, but milder than pelitory of *Spain*. The highest part of the shaft is angular, hairy, and divided into sprigs, on which are umbellated white radiated flowers, twice or thrice bigger than those of yarrow; their disk consists of several florets set close together, and divided into five segments; but the crown of semi-florets is placed upon embryoes in a slender short cup, that afterwards turn to slender seeds; it flowers in *July*, and the root and leaves have been sometimes in use. The root being eaten is said to purge the head and cure the tooth ach. Some eat them in sallads.

DRACUNCULUS ESCULENTUS, *Tarragon*, grows to the height of two cubits and upwards. At first the leaves are divided; but, when they are full grown, they become like those of flax or hyssop, of a shining blackish green colour. The flowers grow on the top of the branches in bunches, and consist of florets so small that they are hardly visible; however, upon examination, they appear to be tubulous, and divided
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into five parts at the top, under which are embryos placed in a scaly cup; each embryo turns to a small naked seed. The whole plant is very acrimonious, is aperient, diuretic, and proper to open obstructions; being chewed it provokes spittle like pellitory of *Spain*. It is mixed with sallads by some to correct the coldness and crudity of other herbs, and because it is good for a cold stomach.

EBULUS, *dwarf Elder*, is somewhat like common elder, but seldom grows so tall as a man; the root is long, fleshy, white, spreading, and of a bitterish, sub-acrid, and nauseous taste; the stalks are herbaceous, angular, streaked, and geniculated, with frequent joints, and are pithy like common alder; the leaves consist of three or four conjugations, with a single leaf at the end; they are longer than the leaves of common alder, as well as sharper, and are serrated on the edges. The flowers are small, grow in umbels, are white, and consist of a single petal divided into five segments; they have five white stamina, and as many rusty coloured apices; when the flowers are fallen off, the flower-cups turn into berries, which are black when ripe, and the juice will colour the fingers purple. It is found wild in some countries of *England*, but near *London* is cultivated for use. It multiplies exceeding fast, and, if permitted, will soon over-run a large spot of ground. The off-sets of these roots may be transplanted any time from *September* to *March*, and will grow in any soil or situation. The leaves of this plant are bitterish, and the berries very bitter, with somewhat of an astringency. It is a strong purge, but the roots are most powerful as well as its bark. They have been frequently given in the dropsy, but with different success; however, it should not be exhibited at all, except to those that have strong constitutions. The powder of the seeds is given to a dram; but a rob made of the berries is the most proper to purge off water in dropical patients, and may be exhibited from half an ounce to an ounce.

ENDIVIA, *five INDYBUS*, *Endive*, is of three sorts, the broad leaved or common *Endive*, the narrow leaved or lesser *Endive*, and the curled or *Roman Endive*. The

first has fibrous roots full of milk, and the leaves spread on the ground before the growing of the stalk. The leaves are like those of lettuce, and now and then crenated on the edges, and a little bitterish; those that grow on the stalk are like those of ivy, but less. The stalk rises sometimes to a cubit and a half in height, and is smooth, streaked, light, and divided into many crooked branches, which pour out a milk when wounded. The flowers and seeds are like those of succory. *Narrow leaved Endive* differs only from the former in having more narrow leaves, and a more bitter taste. The *Roman* or *curled Endive*, has leaves that are bigger than those of the common, which are situated on the edges; the stalk also is larger, thicker, and more tender, and the seeds are black. The first and second sorts are now disused in kitchen gardens, as being vastly inferior to the curled kinds. The seasons for sowing the seeds are in *May*, *June*, and *July*, at four or five different times; but that which is first sown is very apt to run to seed, especially if the autumn prove warm and dry; however, it is necessary to have a little sown in *May* for the first crop. They should be sown in an open situation, and in a good rich soil, but not too thick. When they are come up, and grown to about two inches high, they must be transplanted into another good open spot of ground, at about ten inches distant every way, observing to cut off the largest leaves before you plant them, as also to water them constantly every other evening until they have taken fresh root. Some of the largest must be tied up with osier twigs to blanch, which should be done in a dry afternoon. You must first gather up all the inner leaves of the plant regularly into one hand, and then those on the outside that are sound, pulling off all that are rotten and decayed, placing them as near as possible in the natural order of their growth; then tie it up with a twig very close, about two inches below the top, and about a week after go over the plants again, and give them another tie about the middle. This must be done for the two first sowings; but those of the latter sowings should be taken up in a very dry day, and, with a sharp pointed dibble, plant them into the sides of trenches of earth,

earth, which are laid very upright, sideways towards the sun, with the tops of the plants only out of the ground, so that the hasty rains may run off, and the plants be kept dry and secured from frost. They will be fit for use in about a month's time, after which they will not keep good long, and therefore fresh ones should be put into the trenches every fortnight at least, that you may have a constant supply. The blanched leaves are more tender and more agreeable to the palate than the green. They are cooling and aperient, and serve to temperate the heat of the blood and bilious humours. They are good in the jaundice and bilious fevers, and four ounces of the juice is a dose.

ENULA CAMPANA, *Elecampane*, has a thick fleshy root, of a dusky colour without, but white within, with an acrid, bitterish, aromatic taste. The leaves are a cubit in length, and almost a span broad; they are of a pale green above, hoary underneath, crenated on the edges, sharp at both ends, and soft to the touch. The stalks rise to three or four cubits in height, and are strait, villous, streaked, branched, and support radiated gold coloured large flowers, whose florets are hermaphrodites, but the semi-florets are female; the embryos which are placed on a naked placenta are crowned with down, and are all included in a scaly cup. *Elecampane* grows wild in moist fields and meadows in several parts of *England*, and is cultivated in the gardens near *London*. It may be propagated by seeds, or with the small off-sets furnished with buds at the top. The seeds should be sown in a moist bed of light earth soon after they are ripe, and they generally remain in the ground till the following spring; when the plants appear, they should be weeded and watered in a dry spring; should remain in the bed till the *Michaelmas* following, and then be transplanted in rows about a foot asunder, and nine inches distant in the rows, making the holes deep enough, and putting the crown of the root just under the surface of the ground; then tread the earth gently about them with your feet. The roots will be fit for use the *Michaelmas* following. The root is of great use as well recent as dry: it opens obstructions of the glands, helps catarrhs, and has of-

ten been found good in atrophies. It is sudorific and diuretic, and has been found of service in feverish disorders. It is likewise good in difficulty of breathing, and the moist asthma. The dose of the fresh root is from half an ounce to an ounce in decoction, and of the dry, in powder, from a dram to two drams. It also helps digestion, by restoring the lost tone of the stomach, and by inciding and expelling the impurities contained in the stomach and intestines. For the same reason, it is good in cholic pains proceeding from wind, and cleanses the kidneys. Spirituous liquors extract its virtues much better than the watery.

ERUCA, *Rocket*, has a white, woody, slender root, with hairy stalks that rise to a cubit, or a cubit and a half in height. The leaves are like those of mustard, they being long and narrow, with deep incisions on each side. The flowers at the top of the stalks consist of four petals, in the form of a cross, of a whitish yellow colour, with blackish streaks. The cup is hairy, from whence rises a pistil, that turns into a pod like that of mustard, but longer, with a partition in the middle. It is divided into two cells full of yellow seeds, larger than those of mustard, and not so round. The smell of this plant is strong and disagreeable, as well as the taste. There are several sorts of rocket that are planted in physic gardens, but are of no great use. They may be propagated by sowing their seeds in the spring, on a bed of light earth, where they will soon come up, and will be large enough for use in a short time; when young, they are eaten by some as a salad. This plant is said to excite the appetite and help digestion, to strengthen the stomach, and to promote urine.

ERYSIMUM, *Hedge Mustard*, has a single, white, woody root, about as thick as one's little finger, and the stalks rise to two cubits in height, which are round, firm, rough, and branched. The first leaves are a palm in length, and are hairy, being divided into several triangular segments, of which the uppermost is the biggest. The flowers are small, and placed in rows on the branches; they consist of four yellow petals, in the form of a cross, with a hairy calyx consisting of four leaves. The pistil is changed into a pod half an inch

inch or longer, which is horned and divided into two cells, containing many small bay hot seeds. It is accounted good in old coughs, the asthma, and other disorders of the lungs; for it not only dissolves viscid matter in the lungs and fauces, but also in the stomach and intestines, whence it is good in cholics proceeding therefrom. The dose of the leaves in decoction is a handful, and of the seeds, which are best, to a dram. These last are good in a suppression and difficulty of urine; and some esteem them very much for their good effects against the gravel.

ESULA MINOR, *the lesser Spurge*, has a woody fibrous root, about the thickness of the little finger, which has a nauseous, acrid, pungent taste; the stalks grow to a cubit in height, and the leaves are placed very thick thereon; they are at first like those of toad flax, but afterwards grow much more slender and capillaceous. The flowers grow on the top of the branches as it were umbellated, and consist of a single petal, which is in the shape of a flower, and of a greenish colour, but divided into four segments. The pistil changes to a triangular fruit, in which are three cells containing three roundish seeds. The whole plant is full of milk, and grows by the way sides and in woods.

EUPATORIUM CANNABINUM, *Hemp Agrimony*, has a thick crooked root, with many large fibres; the stalks rises to two or three cubits high, and is strait, round, downy, of a purplish green colour; and also full of white pith. The leaves grow thick upon the stalks, and are like those of hemp, they being oblong, acuminate, and serrated on the edges. The flowers are collected into umbels on the top of the branches, and consist of many tubulous florets of a purplish colour, divided into five parts at the top, with long capillaments or double pistils, placed upon an embryo in a long, round, scaly cup. The seeds are pappous, or furnished with a long hairy down. It grows in waters, and in watery places. It is said to be hepatic, aperient, and vulnerary; and the leaves have a very bitter taste, with a great degree of pungency. It is said to be greatly prevalent against the cachexy, and

Boerhaave informs us, that it is the constant medicine of the turf-diggers in *Holland* against scurvies, foul ulcers, and swellings of the feet, to which they are subject. Many drink it like tea several times a day; and others give three ounces of the juice. Externally, the leaves and floret tops boiled in wine are good against watery swellings.

EUPHRASIA, *Eye-bright*, has a single slender root, with a few large fibres; the stalks rise to the height of a palm and a half, and are round, a little hairy, and blackish, with leaves about a quarter of an inch long, that are roundish, smooth, though a little wrinkled, and of a dusky green. They are placed by pairs opposite to each other, without any pedicles. The flowers grow on the top of the branches, and consist of a single whitish petal, streaked with purple and yellow lines, and divided into two lips. The upper lip is upright, cloven, obtuse, crenated, and hides a few stamina; but the lower is divided into three segments, in the shape of hearts. The calyx is divided into four parts, and contains a pistil fixed in the back part of the flower, like a nail, which turns to a fruit or flat capsula a quarter of an inch long, divided into two cells full of exceeding small, oblong, ash coloured seeds. It is common in mountainous and woody places. This plant has been greatly celebrated for curing disorders of the eyes; but it is not acknowledged at present to have any such virtues. It is said to dissolve the thick gross humours, especially of the brain. The dose of the leaves, in powder, is from one dram to three, thrice a day.

FABA MAJOR HORTENSIS, *Windſor Beans*, has a root that is partly strait and partly creeping, with a quadrangular stalk, that is light and has several ribs. The conjugation of the leaves are not exact; for there has been sometimes three, four, five, or more, of an oblong roundish shape, that are flat, of a bluish green, veinous and smooth. The flowers proceed from the hollows where the ribs join to the stalk, and, tho' several of them are together, they have but one pedicle; they are papilionaceous, and are succeeded by a long pod, so well known that it needs no description. There are several

veral sorts of beans, as the *Maxen Bean*, which is the first and best sort of early beans at present known, and are brought from a settlement of the *Portuguese* on the coast of *Africa*, near *Gibrona*. The seeds of this sort are much less than those of a horse-bean, and if they are sown in *October*, under a warm hedge or wall, and are carefully earthed up as they grow, they will be ready for the table in *May*. The *early Portugal Bean* differs little from the former, though it is not so well tasted; but is commonly used by gardeners for their first crop. The *small Spanish Bean* will come up soon after the former, and is much sweeter. The *Sandwich Bean* comes up soon after the *Spanish*, and is almost as large as the *Windsor* bean; but, being more hardy, is commonly sown a month sooner. The *Toker Bean* comes up about the same time with the *Sandwich*, and, as it is a great bearer as well as that, it is now much planted. The *white and black blossomed Beans* are in great esteem by some; but all these sorts are very apt to degenerate, if their seeds are not preserved with great care. The *Windsor Bean* is allowed to be the best of all, and are the largest. It is seldom planted before *Christmas*, because it will not bear the frost so well as any of the former. Those that are planted in *October* will come up about a month after, and, as soon as they are two inches above ground, the earth should be carefully drawn up with a hoe to the stems; and this must be repeated two or three times, which will protect them against the frost; but, if the winter proves very severe, it will be proper to cover them with pease haulm, fern, or some other light covering, which must be taken off in mild weather. The *Horse Bean* delights in a strong moist soil, that lies quite open; for they never thrive well on dry warm land, or in small inclosures. The season for sowing these beans is from the latter end of *February* to the beginning of *April*, according to the nature of the soil.

With regard to the nature and faculty of beans, authors are not agreed; but the common opinion is, that they are windy and hard of digestion. Some have doubted the nourishing quality of Beans; but innumerable experiments have established their credit be-

yond all contradiction. The meal of dried beans is reckoned among one of the four resolvent meals, and is used by some as a cataplasm, boiled in milk, to resolve and suppurate tumours. The water distilled from the flowers is looked upon as a cosmetic, and is still in use, to take away spots on the face.

FILIPENDULA, *Drop-wort*, has a fleshy blackish root, which terminates in several branches or fibres, and near the ends there are knobs, or bulbs; somewhat longer than an olive. There are several leaves that proceed from the root, which are finely cut into narrow segments, and are of a blackish green colour; the stalk is generally single, erect, and about a foot in height. It is streaked, branched, and has but few leaves, and the flowers grow on the top of the stalks in umbels; they are rosaceous, consist of six white petals, which are a little reddish on the outside; there are many stamens and red apices, placed in a cup consisting of a single leaf that has a great number of points. The pistil turns into a globous fruit, composed of eleven or twelve rough flat seeds, and are so placed together in a head, resembling a tub. It grows wild in many parts of *England*, upon heaths and commons. The leaves of drop-wort have an astringent, saltish glutinous taste; the whole plant is said to incise and attenuate gross humours, and to carry them off by urine. The dose of the root, in powder, is a dram, and some have looked upon it as a secret to cure the bloody flux, when given in wine or the yolk of an egg.

FOENICULUM VULGARE, *common Fennel*, has a perennial root, and is about as thick as one's finger; it is strait, white, and has a sweetish aromatic taste; the stalk rises to the height of three cubits, which is strait, round, streaked, geniculated, smooth, slender, and covered with a greenish rind; it is full of a spongy white pith, and divided into many twigs towards the top. The pedicles surround the stalk and branches like a sheath, from whence proceed the leaves, that are divided into slender segments, or capillaceous jaggs, of a dark greenish colour, with a sweet taste and smell. It is an umbeliferous plant; for the flowers
grow

grow in umbels at the ends of the branches, and are rosaceous, and consist of five yellow petals; the calyx turns to a fruit composed of two oblong thickish seeds, gibbous and streaked on one side, and plain on the other.

FOENICULUM DULCE, *sweet Fennel*, differs little from the former, only the stalk is not so high nor so thick, and the leaves are less; but the seeds are larger, streaked, whitish, more sweet, and less acrid. They are propagated by sowing the seeds soon after they are ripe, and, when the plants are come up, they should either be transplanted, or hoed out, to the distance of sixteen or eighteen inches each way. The seeds must not be suffered to shew on the ground; for then they will over-run every thing that grows near them. The Sweet Fennel is annual, and must be sown in *March*, in a warm soil and open situation. They should be hoed out at the distance of ten inches from each other, and in *August* the seeds will be ripe; soon after which the roots will decay. The best seeds are those that are brought from abroad, which are so cheap, that it is not worth cultivating here. These plants are diuretic, aperient, sudorific, stomachic, pectoral, and febrifuge. The root is numbered among the five aperient roots. The powder of the seeds is given from half a dram to a dram, with sugar in wine. The whole plant, as well as its seeds, is greatly cried up against dimness of the eye sight, especially for those that have hurt their eyes by reading in the night time; for which purpose the powder of the seeds should be taken every morning fasting with sugar. The essential oil is a great carminative, and from six to twelve drops, on a lump of sugar, are a dose. It is good against the flatulent cholic, and helps digestion. The use of green fennel with fish is very well known.

FOENUM GRÆCUM, *Foenugreek*, has a slender, white, single, woody root, from whence proceeds a stalk, that rises to the height of half a cubit, which is slender, green, hollow, and divided into wings or branches; and there are three leaves growing upon one pedicle, like those of meadow trefoil; they are slightly serrated on the edges, and are sometimes more broad

than long; they are green on the upper side, and of an ash colour below. The flowers proceed from the places where the pedicles join to the stalk, and are papilionaceous and whitish, changing to pods a palm, or a palm and a half in length; they are flattish, a little crooked, narrow and slender, with a long, light, slender, sword-like point; they contain many seeds that are yellowish, and have no very agreeable smell. They have a mucilaginous taste, and the meal made there-with softens, digests, ripens, discusses tumours, and eases pains.

FRAGARIA, *the Strawberry plant*, has a perennial reddish root, consisting of many capillaceous fibres, of an astringent taste. The pedicles are a palm in length, and are slender, hairy, and branched at the top, some of which sustain leaves, and others flowers; there are three leaves on every pedicle that resemble those of cinquefoil, which are veinous, hairy, serrated on the edges, of a greenish colour above, but whiter below. There are four or five flowers upon one pedicle, that are rosaceous, and consist of five whitish petals, with as many short stamina sustaining yellow apices. The pistil is globous, and placed in a cup composed of ten parts or segments. The pistil turns to a globous fruit, which when ripe is red, though sometimes whitish, and is very well known. It grows wild in shady places, and is cultivated in gardens. They are of several sorts, as the *common*, or *wood Strawberry*; the *common Strawberry with white fruit*; the *Hautboy*; the *Virginian Strawberry with scarlet fruit*; the *large Chili Strawberry*; the *globe Hautboy*; and the *Strawberry with a small greenish white fruit*. The first and second sorts are found wild in the woods, from whence they are transplanted into gardens, where the fruit is improved, the best season for which is early in the spring, if the weather proves moderate. The best soil for these plants is fresh loam, not over rich, and the ground should be well dug. It should be made quite level, and marked out into beds about three feet and a half wide, leaving a path between each bed two feet broad. In these beds may be planted four rows, and the plants should be at least eight inches asunder in the rows, when

when they are designed for the wood strawberry, for the others will require more room. If it is a dry spring, they should be well watered, otherwise there will be no fruit; and the beds must be well weeded from time to time. They will not continue to bear well above three years. Strawberries are cooling, quench thirst, loosen the belly, promote urine, and expel small gravel. They should be eaten with cream, because with milk they curdle upon the stomach. The roots and leaves are diuretic and aperient, for which reason they are recommended by some in obstructions of the viscera, and the jaundice.

FUNGUS CAMPESTRIS ESCULENTUS VULGATISSIMUS, the *common esculent Mushroom*, when it first appears is globous, after which it expands by little and little, and underneath there are reddish plates placed near together all round; on the upper part it is smooth and white; the flesh is extremely white, and it has a short thick pedicle. The smell and taste are good when it first appears out of the earth, and it should be gathered before it is expanded; for, when it is older, it has a stronger smell, and is of a brownish colour. It grows almost every where in woods and pasture grounds after rain. They have now a method of cultivating it in gardens; in order for which some are to be sought for in *August* and *September*, and having found them you must open the ground about the roots, where you will often find the earth full of small white knobs, which are offsets, or young mushrooms. These should be carefully gathered, preserving them in lumps with the earth about them. The beds to receive this spawn, should be made with dung, in which there is plenty of salts. These beds should be made on dry ground, and the dung should be laid upon the surface; the breadth should be two feet and a half from the bottom, and the length in proportion to the quantity of mushrooms desired. The dung should be a foot thick, and covered with about four inches of strong earth; then lay more dung ten inches thick, and then another layer of earth, still contracting the sides of the bed so as to form it like the ridge of a house. This done, it should be covered with litter, or old thatch, to keep

out the wet, and to prevent its drying. It must remain thus eight or ten days, and the spawn, which should be always kept dry till it is used, should be thrust into the bed after the covering is taken off, and another of earth put on, about an inch thick. It should be laid in lumps two or three inches asunder, and then covered with the same light earth half an inch thick, over which the litter must be laid again to keep out the wet. The spring and autumn are the best seasons for this purpose; for then the mushrooms will appear in about a month. The bed will continue good for several months, and produce great quantities of mushrooms; and they will likewise supply you with fresh spawn, which must be laid up in a dry place till the proper season.

GALEGA, *Goats Rue*, has slender, woody, white, fibrous perennial roots, and stalks that rise to the height of two cubits and upwards, which are light, streaked, and divided into several branches. The leaves are winged like those of vetches, and there is always a single one at the end; but they are longer and terminate in a soft thorn. The flowers are of the papilionaceous kind, and are white, or of a whitish purple colour. It consists of the standard, the wings, and the keel; and the pistil becomes a long taper pod, containing oblong seeds, in the shape of a kidney. It grows wild in *Italy*, but with us is cultivated in gardens. This may be propagated either from the seeds, or by parting of their roots. The best season for sowing the seeds is in the beginning of *March*, in a light soil, and in an open situation; when the plants are come up, they should be well weeded, and, if they are too close, some of them should be pulled up, leaving the rest at eight or nine inches distant from each other. The next year these plants will flower and produce ripe seeds. The roots may be parted into small heads, in order for their increase in autumn. It is accounted a great alexipharmic, and has been commended in pestilential fevers, and for the epilepsy in children. The herb may be eaten either crude or boiled, or a spoonful of the juice may be given for a dose. Some look upon this herb

herb as a great preservative against the plague, and likewise affirm it to be good to kill worms.

GALBOPSIS, *dead Nettle*, or *stinking dead Nettle*, has a creeping root, with slender fibres proceeding from the joints; the stalks rise to the height of a cubit, or a cubit and a half, and are square, hairy, light, and branched. The leaves are placed by pairs opposite to each other, and are somewhat broader than the common nettle, but sharp at the points, and serrated on the edges; they are covered with a sort of down, and on the tops of the stalks and branches there are spikes of flowers, which consist of a single petal, which is labiated, and the upper lip is hollow like a spoon; but the under one is divided into three segments, of which the middlemost is the largest; the stamina, as well as the flower, are of a purple colour, with a strong disagreeable smell. The cup of the flower is in the shape of a funnel, divided into five parts, the pistil is fixed to the back part of the flower like a nail, and is attended with four embryos, that turn to as many oblong seeds, which when ripe are black. It is said to be vulnerary, and that when the fresh leaves are bruised and laid upon old ulcers it will heal them in a short time.

GALEOPSIS ANGUSTIFOLIA FOETIDA, *narrow leaved stinking dead Nettle*, differs very little from the former in either form or virtues.

GALLIUM LUTEUM, *Ladies Bed-straw*, or *Cheese Renner*, has a small, creeping, slender, woody, brown root, from which square stalks proceed to a cubit in height. The leaves are placed at the joints of the stalk, in a radiated form, and are five or six in number; they are long, narrow, slender, soft, and of a darkish green colour. From every joint proceed two branches, on which are flowers, consisting of a single petal, in the form of a bell, which is expanded towards the upper part, and divided into four segments. The calyx turns to fruit composed of two dry roundish seeds. Some of the modern physicians commend it against the epilepsy, and give a dram of the powder for a dose, of the juice four ounces, and a handful in decoction.

GENISTA,

GENISTA, *Broom*, is a shrub that sometimes grows to be as tall as a man; the root is hard, woody, tough, yellow, and furnished with crooked fibres. The stalks are slender, woody, and many twigs proceed from them, that are angular, green, tough, and about them there are small, hairy, dark green leaves, sometimes growing three together, and sometimes single. The flowers that grow thereon are of a beautiful yellow, and papilionaceous, with crooked stamina, and saffron coloured apices; to which succeed flat broad pods, which are blackish when ripe, and full of flat, hard, reddish seeds in the shape of a kidney. It grows in barren grounds all over *England*. There are several sorts of these plants cultivated in gardens, and they may be propagated by seeds, which should be sown on a moderate hot bed, in the spring; as soon as the plants are strong enough to remove, they should each be set in a pot filled with light earth, and it will be safest to plunge the tender kinds of them into a very temperate hot bed, where they should be shaded till they have taken root; then they should be inured to the open air by degrees; but in winter they should be placed in a good green house, and in mild weather they should have as much free air as possible. Several of them are useful in dying, and therefore they have the name of dyers weeds. Common broom is intensely bitter, and the leaves tops and branches, decocted in wine or water, are useful in dropries, and in all obstructions of the kidneys and bladder; for they partly purge off the serous humours by stool, and partly by urine. A dram and a half of the seeds will purge very briskly, and sometimes vomit. In some places they mix the flowers with sallads, without any bad effects.

GERANIUM SANGUINEUM, *bloody Crane's bill*, has a red thick root, and many long thickish appendages, with a few fibres, and every year new shoots proceed from the roots. It has several stalks that arise to a cubit in height, that are reddish, hairy, geniculated, and divided into many wings. A pair of leaves proceed from every knot, which are divided into several parts, and are hairy and green above, but hoary below; there are oblong pedicles that proceed from their

their upper wings, which sustain a single flower, and is the largest of any that belong to this kind of plants; it is of a beautiful red colour, composed of five petals of the same colour, and ten small stamina, that are supported by five hairy, greenish, small leaves. The bill is in the shape of a pentagon, and contains swelling-tailed seeds, which are thrown out by the twisting of the bill with a noise. There is another *Geranium*, called *Geranium Batrachoides*, *Crow-foot Cranes-bill* with a blue flower, which has all the characters of the former, except the colour. Bloody cranes-bill is syptic, and has been used in vulnerary decoctions, or broths. Doves foot cranes-bill has the same virtues as the former, and a syrup made of the juice is commended against the bloody flux.

GROSSULARIA, the common *Gooseberry*, is a shrub, and has a woody root; it is sometimes two cubits high or higher, and is full of branches, with a bark, when full grown, of a purplish colour, and there are long sharp thorns at the rise of the leaves, two or three of which are placed together. These have short pedicles, and are of the breadth of a man's nail, or somewhat broader, and are lacinated or jagged. The flowers are small, and several of them proceed together from the same tubercle as the leaves, and have a very short, hairy, reddish pedicle; they are rosaceous, consisting of five petals of an herbaceous whitish colour, with a calyx consisting of a single leaf in the shape of a basin, and divided into five reddish segments bending downwards, with five stamina and a greenish pistil. The hinder part of the calyx turns into a globous berry universally known. There are several sorts of gooseberries, besides this, cultivated in gardens, as the *large manured Gooseberry*, the *red hairy*, the *large white Dutch*, the *large amber*, the *large green*, the *large red*, the *yellow leaved*, and the *striped leaved Gooseberry*. These are propagated by suckers taken from the old plants, or by cuttings, which is best. The best season for planting them is in autumn, just before their leaves begin to fall, always taking the handsomest shoots, that proceed from branches that bear the greatest quantity of fruit. They should be six or eight inches long, and
planted

planted in a border of light earth, about three inches deep, and exposed to the morning sun, observing to water them a little when the weather proves dry; when they begin to grow, the under shoots should be rubbed off, leaving only the uppermost and strongest. In *October* following, these plants will be fit to remove to an open spot of fresh earth, in which place they may remain for a year, and all the lateral shoots should be taken off, so as to leave the stem clear about a foot above the surface of the earth. In a year's time they may be removed to the place where they are to remain. The best season for transplanting them is in *October*. As to their physical virtues, nothing need to be said about them, they being only eaten for pleasure, or used to make gooseberry wine.

HEDERA TERRESTIS, *Ground Ivy*, has a creeping fibrous root, with slender, quadrangular, reddish, hairy stalks, on which the leaves are placed by pairs on long pedicles; they are roundish, an inch broad, hairy, and crenated; the flowers grow on the top of the stalks, and consist of a labiated single petal. The upper lip is divided into two segments, that turn back to the sides, and the lower into four segments, and the tube is variegated within with deep purple spots and lines, and the opening of the mouth is covered with a sort of white down. The pistil is slender and forked, and the calyx is oblong, narrow, streaked, and divided on the edges into five short segments, which, when the flower decays, has a swelling belly, containing four oblong, roundish, smooth seeds. The whole plant is opening, cleansing, discutient, and vulnerary. It is excellent for wounds and ulcers of the viscera, and is good in the beginning of a consumption. The dose of the tops, reduced to powder, is from half a dram to a dram twice a day. It is also good against the gravel as well as the cholic. *Ray* affirms, that the powder, snuffed up the nose, will cure a violent head-ach. It is common about *London* to infuse the dried leaves in malt liquor, and then it goes by the name of gill-ale.

HEDERA ARBOREA, *common Ivy*, is well known in most parts of *England*, and sometimes grows very large, forming a sort of a tree; at other times fasten-

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ing itself to trees, walls, houses, and churches. It sends forth roots or fibres from its branches, by which it fastens itself to whatever is near it, from which it receives a great part of its nourishment; the leaves are angular, and the flowers consist of six leaves, that are succeeded by black berries, which grow in round bunches, each of which contains four seeds. The leaves are said to be heating, drying, and subastringent; but are seldom given inwardly, because they are offensive to the nerves. The berries purge upwards and downwards, and the leaves applied to corns will take them away in a short time. The gum has been treated of in the former part.

HELIANTHEMUM TUBEROSUM, *five* HELIANTHEMUM INDICUM TUBEROSUM, *the Potatoe plant*. One stalk or more rises from each root, which is green, streaked, rough, hairy, and attains the length of twelve feet or upwards, full of a white spongy pith. The leaves are many, placed in no order, and from the bottom to the top; are greenish, rough, broad, and acuminate like those of the common sunflower, but not so much wrinkled nor so broad. The stalks soon after their rise are branched, and the leaves decrease in size from the bottom to the top. The flowers grow on the top of the stalks, and are of the size of marygolds, and radiated. The disk consists of many yellow florets, with a crown composed of twelve or thirteen streaked pointed gold coloured semi florets, placed on embryos in a scaly villous cup. The embryos turn into small seeds, and the stalk emits several slender creeping roots, that spread themselves on all sides, between which there are many tuberose roots, sometimes adhering to the chief root, and sometimes connected to long fibres a foot distant from them. One root will produce thirty, forty, fifty, or more potatoes. These are reddish or whitish without, and consist of a whitish substance, or flesh, with a sweetish taste, and are often bigger than a man's fist. They continue in the ground all the winter, and the next year they spring again. This plant has been greatly propagated in *England* for this forty or fifty years past; for, tho' it was brought from *America* in 1623, it was not much cultivated before,

fore, because they were then thought only fit for poor people; but now they are in general esteem. It is propagated here by the roots, which if large are cut into pieces, preserving a bud or eye in each; but the best method is to plant the finest roots entire, allowing them a pretty large space of ground between the rows, as also each root, and then those that are produced will be large the following autumn. A light sandy loam is best, if not too dry or moist; it should be well ploughed two or three times, and the deeper the better. They are very nourishing, abate the acrimony of the blood and juices, and are consequently good in disorders of the breast. Some people in *France* eat them raw with salt and pepper.

HERNIARIA GLABRA, *smooth Rupture-wort*, and **HERNIARIA HIRSHUTA**, *hairy Rupture-wort*, are both small herbs that lie on the ground, and are divided into several branches that proceed from a small root, which descends directly downwards; the stalks are round, reddish, and full of joints, at each of which there are very small leaves, placed in pairs opposite to each other, less than those of dodder, and of a yellowish green colour. From the same joints there proceed many flowers that are small, yellowish or white, without petals; but there are many stamina. The pistil turns into a very shining small black seed, contained in an oblong streaked capsula, that was the calyx of the flower. It is a very mild astringent, and is likely to be of some service in a flaccid state of the viscera. The dose of this herb, in powder, is a dram; and, when a handful of the herb is steeped in a pint of wine or water, five or six ounces may be given at a time.

HORMINUM, *Clary*, has a single, woody, brown root, with many fibres, from whence arises a stalk to the height of two cubits, about as thick as one's finger, quadrangular, hairy, geniculated, and divided into branches; it is full of a white pith, and the leaves are set by pairs opposite to each other, which are hoary, wrinkled, of a roundish oblong shape, a span in length, and half a span broad, terminating in a point, and a little dentated or crenated on the edges; they
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are a little hairy, and gradually decrease in size from the bottom to the top. The flowers proceed from the places where they join the stalk, and consist of a labiated single petal, whose upper lip is long and falcated, with a slender crooked pistil, cloven at the top, and attended with four embryos; there are two stamina with oblong apices, that are hid thereby; but the lower lip is divided into three segments, the middlemost of which is hollow like a spoon. The calyx is tubulated, streaked, glutinous to the touch, and divided into five small spines, whereof three arise above the flower, and the other two are below. The embryos at the bottom of the calyx, when they are ripe, turn to four large roundish seeds, gibbous on one side, angular on the other, slippery, and bright, and of a reddish colour. It is found dry on many banks in various parts of England; but there are many other sorts that are cultivated in gardens. The leaves and flowers are given in decoction in water and wine, in some cases peculiar to women. It is usually drank as pea.

HYOSCYAMUS NIGER VULGARIS, *black Henbane*, has a thick, wrinkled, long root, divided into many parts, brown without, and white within, with broad, soft, hairy leaves, of a light green colour, and deeply cut on the edges; they are placed in an irregular order, or branched, thick, roundish, hairy stalks, that arise to a cubit in height. There are long rows of flowers on the stalk, that consist of a single petal in the shape of a funnel, with a short cylindraceous tube, and is divided into five obtuse segments, of a yellowish colour on the edges with purplish veins; but the middle is of a blackish purple, with five short purple stamina, and thick oblong apices; the pistil is long and white, with a round apex, and the calyx is hairy, oblong, and consists of a single leaf, having stiff acuminate teeth on the edges, of which there are five in number; this turns to a fruit in the shape of a pot with a cover to it, and is divided into two cells, containing several ash coloured, small, roundish, wrinkled, flat seeds. The whole plant has a disagreeable smell, that renders the head heavy and produces sleepiness. It is very

common

common in *England*, growing on the sides of banks and old dunghills every where.

HYOSCYAMUS ALBUS, *white Henbane*, differs from the former in having softer and lesser leaves, covered with a greater plenty of white down, as also whiter seeds. They have been only used externally to ease pains, and to abate the acrimony of the humours; however, it is not safe used any way, for it produces extreme sleepiness, and strange fantastical dreams.

HYPERICUM, *St. John's-wort*, has a woody, fibrous, yellowish root, with many stiff, woody, round, reddish, branched stalks, that rise to the height of a cubit or higher; the leaves are placed thereon by pairs opposite to each other, but without pedicles; they are above half an inch long, a quarter of an inch broad, smooth, and with nerves that run throughout the whole length; when they are held up to the sun, they seem to be perforated with a great number of holes, which are nothing else but vesicles full of an oily juice. The flowers grow on the extremities of the branches, and are roseaceous, consisting of five gold coloured petals, in the middle of which there are a great number of capillary stamina, with golden apices. The cup is composed of five leaves, contains a thick pistil divided into three parts, and placed in the center of the flower; turns to a capsula divided into three cells, containing very small, oblong, brownish black seeds. Both the flowers, and the head full of seeds, when rubbed, yield a red juice. The leaves have a saltish, bitterish, styptic taste, and the whole plant is accounted the principal of the vulnerary kind; for which reason it is recommended to cure wounds both inwardly and outwardly, as well as for spitting and pissing of blood. The dose of the floret tops, in decoction or infusion, is a handful, and sometimes the leaves and seeds are prescribed to a dram. *St. John's-wort*, applied outwardly, is an excellent vulnerary, and cures wounds, bruises, and ulcers.

HYSSOPUS, *Hyssop*, has a woody, hard, fibrous root, about as thick as one's finger, with stalks that grow to the height of a cubit, which are branched and brittle.

brittle. The leaves are placed by pairs opposite to each other, and are from an inch to an inch and a half in length, and only a sixth part of an inch broad. They are sharp, smooth, of a dusky green, with an acrid taste, and a sweet smell. The flowers grow at the tops of the stalks, and are large, blue, labiated, and consist of a single petal, whose upper lip is upright, roundish, and divided into two segments, and the lower into three; the middlemost of which is hollowed like a spoon, having a double part, and is somewhat winged. There are four oblong blue stamina, with small dark blue apices. The flower-cup is long, streaked, and divided into six segments, from which the pistil arises, fixed in the back part of the flower like a nail, attended with four embryoes, which turn into as many small, roundish, brown seeds, contained in a capsula that was the cup of the flower. Hyssop is propagated either by seeds or cuttings, and must be sown in *March*, on a bed of light sandy soil, and when they are come up they should be transplanted out to the places where they are to remain, placing them at least a foot asunder every way. The cuttings should be planted in *April*, or *May*, on a border where they may be defended from the violent heat of the sun, and being frequently watered they will take root in two months, after which they may be transplanted where they are to continue. Hyssop has an acrid taste, and a strong aromatic smell. It strengthens the stomach, helps digestion, incides viscid mucus of the lungs, and promotes expectoration: whence some account it a specific in the moist asthma. It is given in infusion, or decoction, in water, wine, or ale, from half a handful to a handful and a half.

JASMINUM, the *Jessamine tree*, has a pinnated leaf, and the cup of the flower consists of a single leaf divided into five segments; the flower also consists of a single leaf, in the shape of a funnel, and divided into five segments, with small apices; the embryo is roundish, with a pistil like a thread, of the length of the stamina, with a double apex. The embryo turns to an oval smooth berry, divided into two cells, in each of which there is a large oblong oval seed, wrapped up in a membrane, convex

convex on one side, and flat on the other. It is very common in most *English* gardens, where it is cultivated for the sweetness of the flowers, and is propagated by laying down the tender branches in the spring. In the succeeding spring, they will be rooted strong enough to be transplanted; and it must be placed against a wall, or pales, where the flexible branches may be supported. It was formerly in some esteem for its medical virtues, but is now out of use.

IBERIS, *Scitica Cresses*, whose flower consists of four unequal parts, that are vertically oval, blunt, and open, with oblong erect heels; of which the outer ones are by far the greatest, and the innermost least and bent back. The flower cup has four leaves, vertically oval, concave, open, small, equal, and soon fall off; the stamina are six subulated erect filaments, of which the two lateral are the shortest, and the apices are roundish. The germen, or embryo, is roundish and flat, and the style, or pistil, single and short, with a blunt apex, and turns to a small roundish flat pod, consisting of two cells, in each of which there is an oval seed. It has the same virtues as water cresses, and, when bruised together with salt and hog's-lard, makes an excellent cataplasm against the hyp-gout. It is only to be met with in botanic gardens.

JUGLANS, *the Walnut-tree*, is very large, and stands upon many very long roots. The trunk, or stem, is very thick, insomuch that in some countries it is three cubits in circumference, with many branches at the top. The bark is thick, of a greenish ash colour, and smooth; but, when it grows old, is full of chinks. The wood is well known for making or covering curious cabinets, chests of drawers, and the like, and is greatly esteemed for its beautiful variegations. The leaves are disposed in wings, and there are five, six, or seven adhering to one rib, consisting of conjugations, with a single leaf at the end. At first they are tender, reddish, and have a sweet smell; but, when they are full grown, they are a palm and a half in length, and almost a palm broad, and pointed at both ends, with veins that run from the middle nerve, and are smooth, of a beautiful green, with the smell of laurel, but much stronger.

stronger, and of an astringent taste. The smell of the walnut is at first pulpy and white, and of a bitter acrid taste; but, as it ripens, it becomes woody, and divides into two parts, in which is a kernel with four lobes, and covered with a thin skin. The taste is sweet and agreeable when fresh; but, when dry, it becomes oily and rancid. The skin is bitter, acrid, and when the kernels are fresh may be easily taken off. Walnuts are of different species, as the *largest Walnut*, the *thin shelled*, the *hard shelled*, the *late ripe*, the *black Virginia*, the *black Virginia with long fruit*, the *Hickory*, the *shag bark*, the *small Hickory* or *white Virginia*, and the *least Virginia Walnut*. The four first sorts are propagated every where in *England*, and the first and second are preferred for their large nuts. The *Virginian* sorts are only rarities, but are worth cultivating for their timber. All sorts of walnuts, that are propagated for timber, should be sown in places where they are to remain, but such as are designed to produce good fruit, are greatly mended by transplantation. The nuts should be preserved in their outer covers till *February*, when they should be planted in lines at the distance they are intended to remain. When these trees are transplanted, neither the roots nor branches should be pruned. The best season for this is as soon as the leaves begin to decay, and this may be done till they are eight or ten years old. They delight in a firm, rich, loamy soil, or such as is inclinable to chalk or marl. They should be placed forty feet asunder, when any regard is had to the fruit; but, when for timber, they must stand near each other, because it promotes their upright growth.

The inner bark of the *Walnut tree* is a strong vomit, but the catkins are more gentle, and have been given in powder from half a dram to a dram. Some account the leaves an excellent cataplasm against the gout, when they are placed while green in a glazed earthen vessel one layer upon another. The juice of the root is a violent purge, unless it proceeds from the wounded root in *February*, and then it is recommended in chronic diseases, especially in the gout, gravel, and head-ach; for it greatly promotes urine. The green
outer

outer rind is astringent, and is said by some, when recent, to have an emetic faculty. The kernels are best while fresh, because when old they grow rancid, as was before observed. The membrane, or pith, powdered and given to a dram, is good in the cholic, and by some esteemed as a secret against fluxes of the belly.

JUNIPERIS, *the Juniper tree*, is a shrub well known in all parts of *Europe*, and grows in woods and mountainous places. The stem rises sometimes to the height of a man, but is slender, and has many branches, with a rough reddish bark. The wood is pretty firm and reddish, especially when it is dry, with an agreeable resinous smell. The leaves are very sharp, exceeding narrow, and seldom above an inch in length, but often shorter; they are stiff, pungent, always green, and several of them grow together, with some distance between. The catkins appear in *April* and *May*, in the places where the leaves join to the stalk, and are a quarter of an inch long, variegated with purple and saffron colours; they consist of several scales, whose lower part is furnished with three or four vesicles, less than poppy seeds, which are full of a fine golden coloured powder. This is the male flower, but the cup of the female flower is very small, adhering to the embryo, and divided into three parts, and there are three stiff sharp petals. The pistil is divided into three single styles, with each a single apex; and they turn to a fleshy roundish berry, containing three seeds each, convex on one side and angular on the other. Some trees produce only the male or female flowers, and others both. The berries do not grow ripe till the second year, and there are some that are three years old. The berries are resolving, discutient, attenuating, heating, abstergent, and strengthening. They are good in a cold stomach, discuss wind, help digestion, promote urine, and ease the pains of the cholic. They are likewise good against coughs, and in the moist asthma; they restore the fluidity of the blood, and promote sweat. The dose is a dram, which may be either eaten, or their infusion may be drank in the manner of tea, before meals, to help digestion. Many will eat a pugil at a time, without any manner

manner of harm, and have found they have not only brought away gravel but small stones.

LACTUCA SATIVA NON CAPITATA, *common garden Lettuce*, has a long thick root with many fibres, and oblong, broad, wrinkled, smooth, palish green leaves, which are very agreeable while young, but bitterish when old. When it shoots up to a stalk, it is strong, thick, round, and grows to the height of a cubit and a half and upwards. The flowers are collected in a sort of an umbel, and the flower-cup is imbricated, consists of many acuminate scales, and is of an oblong oval shape. The flowers consist of many yellow semi-florets, with five very short capillary filaments, on which are cylindraceous tubulated apices. The pistil is like a thread of the length of the stamina, on which are two apices bent backwards, to which succeed small seeds, sharp at both ends, furnished with down, and of an ash colour.

LACTUCA SATIVA CAPITATA, *Cabbage Lettuce*, has shorter and broader leaves than the former, which are soon collected into a round head: the seeds are like the former but black. Besides these, there are the *Silicia Lettuce*, the *Dutch brown*, the *Aleppo*, the *imperial*, the *green capuchin*, the *upright white Cos*, the *black Cos*, the *white Cos*, the *red Capuchin*, the *Roman*, the *prince*, the *royal*, and the *Egyptian Cos Lettuce*. The first of these is commonly sown for cutting very young, with other small salad herbs. They may be sown any time in the year, but in winter it should be under glasses. The *Cabbage Lettuce* may be also sown at different times of the year, particularly in *February* for the first crop, in an open warm spot of ground, and when they are come up they should be thinned to the distance of ten inches every way. The seeds, that are sown for the succeeding crop, should be in a shady moist situation, but not under trees. Those for the last crop should be sown in *August*, on a good light soil, and in a warm situation. In the beginning of *October*, they should be transplanted into warm borders, where, if the winter is not very severe, they will stand very well. Most of the other sorts may be sown in *March*, upon a warm light soil, and in an open situation, and

afterwards in *April, May, and June*; and in *August*, those that are intended for the winter, which should be transplanted either under glasses, or in beds arched over with hoops, in order to be covered over in the winter.

The *Roman Lettuce* has longer and narrower leaves than the two first, and not so wrinkled, and underneath, on the sides of the rib, there are small prickles. Some, as these lettuces grow, tie the leaves together, by which means they become exceeding white and tender; and then they are thought by many to excel all other kinds. In general lettuces are easy of digestion, abate the acrimony of the humours, and quench thirst; for which reason they are frequently used in the summer season. Many take them to be anodyne, and to procure sleep, which is done not by any narcotic quality, but by relaxing the fibres, and temperating the heat of the viscera. They are good in dry constitutions, and help those that are costive.

LAPATHUM MAJUS, five RHABBARBARUM MONACHORUM, *Manks Rhubarb*, has a long thick root, from which proceed many fibres, and is brown without, but within of a deep saffron colour. The stalk, which sometimes rises to the height of a man, is reddish, streaked, and divided into many branches at the top; the leaves are from a foot to a foot and a half long, and are broad, acuminate, firm, smooth, of a darkish green, but not hard and stiff; the edges are sometimes a little turned up, but they are even, and have long pedicles. The flowers grow in long rows on the stalks, and are like those of sorrel, to which succeed angular seeds contained in membranaceous cells, and are like those of the dock; they are said to purge gently, to be a powerful astringent, and to open obstructions of the liver; whence the powder or decoction is given in some fluxes of the belly. The dose, in powder, is from a dram to half an ounce, when it is designed to purge.

LAPATHUM SANGUINEUM, *Blood-wort*, is not unlike the garden dock, but may be easily distinguished from all other docks by its blood-red juice, and by its numerous nerves; the juice first tinges the hands with a purple

purple colour, which afterwards changes to blue. The leaves are eaten by some after they are boiled, and have likewise been prescribed in emollient and cooling broths. The seed is strengthening, astringent, and anodyne, and the powder of them is given from half a dram to a dram to stop uterine fluxes, and those of the belly attended with gripes.

LAPATHUM ROTUNDIFOLIUM, *five* **LAPATHUM MONTANUM**, *bastard Monks Rhubarb*, has a long branched root, and each of the branches are as thick as a man's thumb; they are wrinkled and fibrous, and of a deep yellow, with a bitter taste. The stalk sometimes rises to three cubits high, and is hollow, furrowed, reddish, and has many wings. The leaves are like those of burdock, and are remarkably round, smooth, and of a yellowish green, with a reddish streaked pedicle. There are several flowers placed upon the stalks, consisting of many yellow stamina and apices, with a calyx composed of six leaves, to which succeed triangular reddish seeds. The root is variegated with yellow and red, like true rhubarb, and some pretend it has the same virtues, but weaker. Its dose, in powder, is to two drams. When the roots are taken fresh out of the ground, and dried in the shade, they are used in fomentations, liniments, and ointments against diseases of the skin.

LAPATHUM AQUATICUM, *five* **HYDROLAPATHUM**, *great water Dock*, has a more fibrous root than the former, which is black without, and of the colour of box within. The stalks rise to the height of two or three cubits, and the flowers and seeds are like the former, but larger; the leaves are broad, long, and somewhat like those of monks rhubarb; but are almost a cubit and a half in length, terminating in a sharp point, with the edges slightly curled. It grows in marshy places, and by the sides of ditches. The leaves of this plant are styptic and bitterish, and the taste of the root is very bitter. The root is a laxative, opens obstructions of the viscera, and is good in diseases of the skin. The fresh root is given from an ounce to two ounces in decoction, and in substance, when dry, from a dram to two drams.

LAPATHUM SPINACIA DICTUM, *Spinage*, of which there are three kinds, the *common Spinage*, the *common barren Spinage*, and the *common Spinage with a capsula of the seed not prickly*.

The *common Spinage*, or the *common prickly narrow leaved Spinage*, has a slender, white, single root, with a few fibres, and the stalks, which rise to the height of a foot, are fistulous, round, streaked, divided into wings, and have long pedicles. The leaves at the bottom are sometimes jagged on both sides, with sharp points; but those on the top have only two processes, like ears at the base, with a fine sort of meal thereon. The flowers are placed on the stalks from the middle to the top, and are without petals; but they have many stamina and small herbaceous, or purplish small apices, placed in a cup, consisting of four leaves. Those that arise from the wings of the leaves, or the female plants, have no petals, but only greenish embryoes, with four whitish filaments, that turn to a pretty large fruit, or capsula, with prickles adhering thereto. It is planted in gardens.

Common smooth seeded Spinage, with broader leaves, has much larger leaves than the male and barren or female kinds, and are also rounder, and the capsula of the seeds is quite smooth, and of an ash colour. These are common kitchen herbs throughout *Europe*. In general, they are said to temperate acrid bilious humours in the first passages; but, as they are watery, some correct them with salt, pepper, and other spices. They do not yield much nourishment, but are not unwholesome, and generally keep the body open. The seeds of the male and barren kinds should be sown in an open spot of ground in the beginning of *August*, when it is likely to rain; when the plants are come up, they should be thinned, leaving them three or four inches asunder; and this should always be done in dry weather. In *October* they will be fit for use, and then you should only crop off the largest leaves, leaving those in the center of the plants to grow bigger. Thus you may continue cropping it all the winter and spring, till the young spinage, sown in the spring, is large enough for use, which is commonly in *April*. The other sort is likewise

wife to be sown in an open spot of ground. The plants should be left about three inches asunder, and, when they are grown large enough to meet, part may be taken up for use, that so the plants, being thinned, may have room to spread; this may be repeated twice, and, at the last, they should be eight or ten inches asunder.

LAVANDULA, LATIFOLIA, *greater, or broad-leaved Lavender*, has a woody root divided into fibres, and the plant consists of many thick, slender, quadrangular, geniculated branches, that rise to the height of a cubit and a half, or two cubits. The lower leaves are thickly placed, and irregular; but the upper are set by pairs alternately, and are fleshy, hoary, and oblong, with a nerve running along the middle; as also a strong agreeable smell, and a bitterish taste. It is a verticillated plant, and the flowers grow on the tops of the branches in spikes, which are blue, labiated, and consist of a single petal; the upper lip is upright, roundish, and cloven into two parts, and the lower into three, that are almost equal. The calyx is oblong and narrow, and from it rises a pistil fixed in the back part of the flower like a nail, and attended with four embryos, that turn to as many seeds, contained in a capsula, that was the cup of the flower.

LAVANDULA ANGUSTIFOLIA, *narrow-leaved Lavender*, is in all respects like the former, only it is less, shorter, and the leaves are lesser, narrower, and not so long or white, nor is the smell so strong; but the flowers are larger. Sometimes they both vary in having white flowers. They are propagated by cuttings or slips, and the best season is in the latter end of March, when they should be planted in a shady situation; or at least be shaded with mats till they have taken root; after which they may be exposed to the sun, and, when they are strong enough, may be removed to the places where they are designed to remain. They delight in a dry gravelly soil, where they will endure our severest winter. *Lavender* is cephalic, nervous, and uterine; for by its aromatic, subtle, acrid particles, it stimulates the nervous fibres to an oscillation, and restores their tone; it dissolves thick humours,

mours, and renders them fit for motion. It is good in catarrhs, the apoplexy, palsy, spasms, the vertigo, lethargy, and trembling of the limbs. The dose of the flowers, or seeds, is from a scruple to a dram; or the infusion may be drank in the same manner as tea. The dose of the conserve of the flowers is half an ounce, and of the essential oil, from two drops to six, on sugar.

LAUREOLA MAS, *Spurge Laurel*, has a tough, thick, long, woody root, divided into several branches, with several ash coloured or whitish stems, rising to the height of two cubits, with leaves like those of laurel, but less, or somewhat like those of myrtle; they are blackish, thick, smooth, shining, and pointed at both ends, and are thickish near the ends of the branches. It is an ever-green, and the flowers that grow on the top are of a greenish yellow, consisting of a single petal, that is fibrous on the back part, but before divided into four acuminate segments; there is no cup, but there is a pistil that turns to a berry, in the shape of an olive, though much less. It is at first green, but black when ripe, and contains a hard oblong seed, full of a white pulp. The leaves, fruit, and bark, are very acrimonious, biting the tongue, as it were setting them on fire.

LAURUS VULGARIS, *the Bay-tree*, in hot countries, grows to a considerable height, and has a smooth trunk without knobs, and long branches; the leaves are long, sharp, hard, nervous, smooth, but have little juice, though they have a fine smell, and an acrid, bitter, astringent taste. The flower consists of a single petal, shaped like a funnel, and divided into four or five segments. The male flowers, which are produced on separate trees from the female, have eight stamina, which are branched into arms; and the embryo of the female flowers becomes a berry, inclosing a single seed within a horny shell, which is covered with a skin. Besides this, there are several sorts of Bay-trees, that are cultivated in gardens, most of which have been lately brought from distant countries. They are propagated either from the seeds, or by laying down the tender branches, which will take root in a year's time,

time, and may then be taken off, and transplanted into a nursery, or the places where they design to remain. The leaves are aromatic, bitterish, with somewhat of an astringency, and they are heating, resolvent, strengthen the stomach, help digestion, and discuss wind; for these purposes, the infusion may be drank as tea, or the powder may be given to a dram. The berries are more heating than the leaves, and two scruples in infusion is a dose; but their principal use in the present practice is in glysters, and the leaves as a fomentation.

LEPIDIUM LATIFOLIUM, *common broad Distander*, or *pepper wort*, has a white root, as thick as one's finger, that creeps in the ground, and has an acrid hot taste, that immediately vanishes. It has several stalks, two cubits in height, that are round, smooth, branched, and full of pith; it is covered with a blueish meal, which may be easily wiped off. The leaves are long, broad pointed, and like those of the citron tree, but larger and softer, of a darkish green, and serrated on the edges. The flowers grow on the tops of the branches, and are small in proportion to the size of the plant; they consist of four petals, placed in the form of a cross; and the pistil, that rises out of the calyx, turns into a very small flat fruit, with a sharp point, and a partition in the middle, that divides into two cells, full of small, oblong, red seeds. The whole plant has an acrid taste, and grows wild in some parts of *England*; but it is generally cultivated in gardens for use. It is easily propagated, by planting small bits of the root, either in spring or autumn; but it should be placed in some corner of the garden, because the root will spread and over-run the ground. This plant incises gross humours, opens obstructions of the liver and spleen, and is accounted by some a great antiscorbutic. When the leaves are eaten fasting in the morning, they excite the appetite, and help digestion.

LEVISTICUM, *Levage*, has a large fleshy root, blackish without, and white within, and the stalks often rise to the height of a man; these are thick, light, streaked, and divided into many branches. The leaves are like those of parsley, but larger every way, and they

they are smooth, shining, of a dark green colour, with a strong smell. The flowers grow in umbels on the tops of the branches, and are rosaceous, consisting of five yellow petals, or upwards. The calyx turns to a fruit, composed of two oblong, thick seeds, gibbous and streaked on one side, and on the other flat, and of a dirty colour. Lovage is said to be alexipharmic, carminative, diuretic, uterine, and vulnerary. It strengthens the stomach, helps digestion, discusses wind, attenuates gross humours, eases pains of the cholic, and is good in the asthma. It is looked upon as a specific against the jaundice, especially when it proceeds from a clammy bile. The dose of the root, in powder, is from half a dram to a dram, and of the seed from a scruple to half a dram.

LIGUSTRUM, *Privet*, is a shrub divided into a great number of branches, covered with an ash coloured bark, and the wood is whitish and hard. The leaves grow by pairs opposite to each other, and are oblong, and narrow like those of willow; but they are shorter, thicker, smooth, shining, and of a blackish-green colour. The flowers grow on the top in bunches, and consist of a single petal in the shape of a funnel, divided on the top into five segments. They are white, have a sweet smell, and in the middle there are placed yellowish green apices, with a green pistil that turns to a soft and almost globous berry, of the size of juniper berries, and are blackish when ripe, and full of juice. They contain generally four globous seeds, with a bay coloured skin, and a whitish pulp. It is common in hedges in most parts of *England*, and generally grows to about eight or ten feet high. The leaves are bitter and styptic, and therefore they, as well as the flowers, are recommended by some against hæmorrhages.

LILIUM ALBUM, *the white Lily*, has a bulbous root consisting of several fleshy scales, united together, and fixed to an axis, under which there are many fibres; the stalk is upright, and sometimes rises to the height of a cubit and a half; it is single, brown, and at the bottom there are oblong, broadish, fleshy, smooth leaves, without a pedicle, of a shining light green colour, but towards the top they become gradually less and narrow, and,

and, if they are rubbed between the fingers, they have a smell like boiled mutton. There are several flowers placed on the top, that do not grow at the same time; they are composed of six leaves, in shape somewhat like a bell, and in the middle there is a longish pistil terminating in three points, of a greenish white colour; the stamina are also six in number, and of the same colour with the petals, with apices of a saffron colour. The pistil turns to an oblong triangular fruit, divided into three cells full of reddish seeds with borders, and lie upon each other in a double row. They are cultivated in gardens for the sake of their beauty and sweet smell. There are many other kinds of lilies, all which may be propagated by sowing their seeds in square boxes about six inches deep, with holes at the bottom, and filled with light, fresh, sandy earth. They are to be sown soon after they are ripe, pretty thick, and must be covered with light sifted earth about half an inch; then the boxes are to be placed where they have the morning sun only, and must be watered in dry weather. They must continue thus till *October*, when they must be removed to places where they may have as much sun as possible, and yet screened from the north and east winds during the winter; but in the spring, about the middle of *April*, they must be removed to their former position; for then the young plants will appear above ground. Here they must remain till *August*, when they must be taken out of the boxes with the earth, and planted in beds of fresh light earth; that is, the small bulbs, together with the earth, must be strewed over the beds, covering them about half an inch thick with fine sifted earth, observing to water them in hot and dry seasons. They must be shaded in the middle of the day, and refreshed now and then with water. In the spring, when the hard frosts are over, the surface of the beds must be cleared, and a little fresh earth sifted thereon; but this should not be deferred too long, lest the shoots should be coming up and broken by this means. When the leaves are decayed, you should stir the surface of the beds again, to prevent the weeds from growing, and in *September* you must sift some more fresh earth, to the thickness

of half an inch. In *September* following, they will require to be transplanted to a greater distance in moist weather.

The flowers are used in emollient cataplasms, and the oil made by insolation is of common use in pains and tumours of all kinds. The roots are also in great request, for softening and ripening tumours, and are particularly recommended for burns and bruises, when roasted under the ashes.

LILIUM CONVALIUM, *Lily of the Valley*, has a slender, white, fibrous root, creeping near the top of the ground, and produces two or three leaves, a palm and a half in length, two inches broad, shining, of a light green, nervous, and terminating in a point; among these the stalk arises to a span in height, which is slender, angular, naked, and from the middle of which, and at the top, there proceeds a long series of flowers, growing at some distance from each other, but almost all looking the same way; they have very short pendulous pedicles, and consist of a single white petal, in the shape of a bell, divided into six segments, with as many stamens, of a greenish yellow, and adhering to the bottom; the pistil is triangular, and turns to a spherical, soft, red fruit, full of pulp, and three hard, horny, bitterish seeds. The flowers only are in use, which have a very pleasant agreeable smell. It increases very fast by its creeping roots, for which reason it may be propagated in great plenty, by parting the roots in *October*; they must be planted in a shady situation, and in a moist soil, placing them near a foot asunder. The flowers have a bitterish taste, and when dried, powdered, and snuffed up the nose, they occasion sneezing. It is accounted a cephalic nervous remedy, and to be good in all diseases of the head and nerves. The dose of the powder is a dram, and of the conserve half an ounce.

LINUM VULGARE, *common Flax*, has a slender root, with a few fibres, and a round stalk, that is generally single, light, smooth, and grows to the height of a cubit, or a cubit and a half. The leaves are acuminate, of the breadth of a straw, and about two inches long; they are alternately placed on the stalk,
and

and are soft and smooth. The flowers grow on the tops of the branches, on slender longish pedicles, and are of a blue colour; they consist of five petals, and, when expanded, are in the shape of a clove gilly-flower. The flower-cup is tubulous, consisting of a single leaf, and is divided into five parts at the top. The pistil, which rises from the center of the flower-cup, turns into a globous fruit, that is slightly acuminate, and is composed of several cells, opening inward, full of flattish oval seeds, blunt at one end, and sharp at the other; they are smooth, shining, and of a yellowish purple colour. It is cultivated for use in many parts of *Europe*, and is accounted, with good management, a very advantageous plant. The seeds are mucilaginous, abate the acrimony of the fluids, and are greatly recommended against heat of urine. The expressed oil loosens the belly, appeases coughs, and promotes expectoration; it is accounted a specific against the pleurisy, when given from two to four ounces every fourth or sixth hour; but it must be fresh, and have a sweet taste. Externally it is emollient, and relaxes the contractions of the tendons. It is called linseed oil, and its use in painting is very well known.

LITHOSPERMUM, *Cromwell*, has a woody fibrous root, about as thick as one's thumb, with upright, stiff, round, rough, branched stalks, that rise to a cubit and a half in length; there are many leaves, placed alternately, that are two or three inches long, sharp, rough, without pedicles, and of a blackish green colour. The flowers proceed from the places where the leaves join to the stalk, and consist of a single white petal, in the form of a funnel, divided into five blunt segments, with a hairy calyx, consisting of a single leaf, cut almost to the bottom in five narrow hairy segments; the pistil is green, and attended with four embryos, that turn to as many roundish, hard, smooth, shining seeds, of the colour and shape of small pearls. It grows in shady lanes, and uncultivated places, in various parts of *England*. The seed is accounted a great diuretic, and a gentle anodyne; for which reason it is recommended to promote urine, and expel gravel. The dose is to two drams.

LUJULA, *wood Sorrel*, is a low plant, with a thickish, scaly, reddish, white root, from whence proceed weak, slender, brown pedicles, a palm in length, on which are three leaves, that are thin, broader than long, smooth, in the shape of a heart, and of a pale green colour. Among these there are other pedicles, each sustaining a single flower, that consists of one petal, in the shape of a bell, and divided into five segments; it is white, open, transparent, and the calyx is divided into five parts, with a pistil fixed in the lowest part of the flower like a nail, that turns to a cylindraceous five cornered fruit, divided into five cells, containing shining reddish seeds, which, when ripe, burst out with violence. It grows in most parts of *England*, and has much the same virtues as common sorrel. It quenches thirst, mitigates heat, and resolves viscid blood; whence it is said to cool the liver, and is accounted a good antiscorbutic. The dose of the juice is an ounce.

LUPINUS, FLORE ALBO, *the white Lupine*, has a single, woody, fibrous root, and a stalk that rises to a cubit and a half in height, which is pretty thick, upright, round, a little downy, and full of pith. The flowers, which grow on the top, are papilionaceous, and appear in spikes at the top of the branches, on short pedicles. The pistil, which rises from the calyx, turns to a thick, broad, flat pod, three inches long, with a yellowish colour, and a little hairy on the outside, but smooth within, and contains pretty large, roundish, flat seeds, white without, but yellowish within, and very bitter. The leaves are irregularly placed on pedicles, two or three inches long, and consist generally of seven oblong, narrow segments, proceeding from the same point of the pedicle, like those of cinque-foil. Lupines are used externally, in decoctions, against diseases of the skin; and their meal is mixed in cataplasms, being reckoned among the four resolvent meals.

LUPULUS, *the Hop-plant*, has a creeping root, with such weak stalks, that they could not support themselves without twisting about whatever is near them; they are exceeding long, rough, angular, hairy, and hollow; the leaves proceed from the stalks

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by pairs, and are placed over against each other; they are like those of the mulberry-tree, and terminate in points; they are generally divided into three, and sometimes into five segments, and are serrated on the edges. That sort, which bears flowers, has no seeds, and that, which has seeds, has no stamina. The male flowers consist of a calyx divided into five parts, and surrounds the stamina, but there are no petals; the flowers of the female plants are collected into scaly heads, which grow in bunches, and have some resemblance to pine-apples; they are composed of several membranaceous loose scales, of a yellowish green colour, and adhere to a common axis; the seeds are small, flat, and red, and have the smell of garlick. The people that cultivate hops reckon three varieties, as the *long square garlick Hop*, the *long white Hop*, and the *oval Hop*, all which are cultivated in *England*, and particularly in *Kent*, where they account new land best for their growth. The first shoots of hops, or rather their heads, are commonly called hop-tops, and are by some accounted not inferior to asparagus. They gently loosen the belly, and are good in obstructions of the viscera; as for the use of hops, it is very well known throughout the world, it being brewed in malt liquors, to prevent their growing sour.

MAJORANA, *sweet Majoram*, has slender roots, and the stalks rise to a palm in height, and upwards; they are slender, woody, often square, a little hairy, and reddish, about which the leaves are placed opposite to each other. It is a very verticillated plant, and the flowers grow on the tops of the branches, and consist of a single, labiated, whitish, petal, whose upper lip is upright, roundish, and divided into two parts, and the lower into three. The flowers are collected into thick, short, round heads, and proceed from a four-fold order of leaves, placed like scales. It is cultivated in gardens, and is an annual plant; for which reason the seeds must be sown every year, which are brought from the southern parts of *France*, where it grows wild. They must be sown in the beginning of *April*, in a dry warm spot of ground, and in *June* the plants will be strong enough to be removed into beds

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of rich light earth, where they are to be placed four inches distant from each other; they will flower in the beginning of *August*, and then is the time to pull them up for medicinal use.

MAJORANA TENUIFOLIA, *gentle Marjoram*, differs only from the former, in having more slender, and fragrant leaves. They both consist of fine oleous, aromatic, active particles, and are used as pot-herbs, and sometimes in sallads, to promote digestion, and to discuss wind. They attenuate gross viscid humours, excite the sluggish, languid oscillations of the fibres, and open the pores of the brain and nerves, upon which account it is good in cold diseases of the head, and trembling of the joints. A scruple, or half a dram of the powder, mixed with a proper conserve, and taken every morning, has been greatly commended in the epilepsy; it is also an ingredient of the cephalic-snuffs, because it is said to purge the head.

MALVA VULGARIS, *common Mallow*, has a single white root, with a few fibres, and a stalk that rises to a cubit and a half in height, and upwards; many of these proceed from the same root, and are round, hairy, branched, and full of pith. The leaves grow single about the stalk on long pedicles, and are roundish and jagged on the edges, with a little down, are of a blackish-green colour, and crenated on the edges. The flowers proceed from the places where the pedicles of the leaves join to the stalk; they are large, in the shape of a bell, and consist of a single petal, divided into five segments, in the shape of hearts; they are purplish, and streaked with deep purple lines, but are sometimes variegated with white. From the bottom of the flower proceeds a tube, in the shape of a pyramid, on which are purplish stamina. It has a double calyx, the innermost of which is divided into five parts, and the outermost into three. The pistil arises from the bottom of the calyx; it is placed in the tube, and turns to a flat round cake, somewhat in the form of a cheese; for which reason they are commonly called cheese-cakes by children. They contain a great number of seeds, in the shape

of kidneys, which are disposed round an axis, in such a manner, that they appear to be very artificially jointed. *Mallows* were formerly used for food; but is now only in request on account of its medicinal virtues, for it is an emollient, and abates the sharpness of urine. It is also used in emollient cataplasms.

MALUS SATIVA, *the Apple-tree*, grows to a considerable size, and the branches are spreading, but more depressed than those of the pear-tree. The flowers consists of five leaves, which expand in the form of a rose, with yellow apices in the middle, and a green calyx, divided into five parts, which turns to a fleshy roundish fruit, generally umbilicated at each end; however, they are of different sizes and shapes, according to their different kinds, which are generally so well known, that they need no description. The first apple which is brought to market is the codlin, and the next is the margaret-apple, which is not so long as the codlin, and the side next the sun changes to a faint red when ripe; but the other side is of a pale green. This fruit is firm, and has a pleasant taste, but does not keep long. The summer pearmain is an oblong fruit, striped with red next the sun, and the flesh is soft, and grows mealy in a short time. The *Kentish* fill-basket is of a large size, is of a somewhat longer shape than a codlin, and ripens a little later. *Loan's* pearmain is a beautiful fruit, and of a fine red next the sun; the flesh is vinous, but soon grows mealy.

The **QUINCE APPLE** is of the size of a golden pippin, but shaped like a quince, especially towards the stalk; the side next the sun is of a russet colour, but the other side is inclining to yellow. It is an excellent apple, but will not keep above three weeks in *September*. The golden rennet ripens about *Michaelmas*, and continues to be a good fruit about a month. The aromatic pippin is of the size of a nonpareil, but a little longer, and the side next the sun is of a bright russet colour. It ripens in *October*. The winter pearmain is rather long than round, of a fine red next the sun, and striped with the same colour on the other side;

side; the flesh is juicy, but it is not a good eating apple. The *Kentish* pippin is large and handsome, and of a pale green colour. It is a very good kitchen fruit, and will keep till *February*. The *Holland* pippin is larger than the former and of a darker green. It will keep longer than the former. The monstrous rennet is very large, of an oblong shape, reddish towards the sun, and of a dark green elsewhere; it is of no great value. The embroidered apple is pretty large, with red broad stripes, from whence it has its name; it is a tolerable kitchen apple. The royal russet is of a deep russet colour, and is large, and of an oblong shape, but broad towards the base, and the flesh is a little yellowish. It will continue good from *October* to *April*, and is the best of all kitchen apples. *Wheeler's* russet is of a light russet colour next the sun, and of a pale yellow on the other side. The size is middling, the flesh firm, and has a quick, tartish taste; it will keep a long while. *Pile's* russet is oval, and of a russet colour next the sun, but of a dark green on the other side; it is a good baking apple, and will keep sound till *April*. The Nonpareil is very well known, but there is another apple generally sold for it, that is a larger fruit, and more inclining to yellow. It is ripe earlier, sooner gone, and is not so flat as the true nonpareil; which last is not ripe before *Christmas*, and will keep good till *May*. The golden pippin is peculiar to *England*, for it will not succeed well in other countries. It is an excellent apple, and would be still better, if proper care was taken in its cultivation. There are a great many other sorts of apples, which have no particular names, except such as serve for making cyder; the redstreak, the whitfleur, the *Hertfordshire* under leaf, the *John* apple, the everlasting hanger, and the gennet moil. They are all propagated by grafting or budding upon stocks of the same kind. Apples in general are used for eating and baking; but, as for their medicinal virtues, they are scarcely worth mentioning, tho' they are said to temperate the bile, and to be good in fevers to allay thirst. Some pretend they are excellent pectorals, and will appease coughs; but this may be doubted.

MALUS GRANATA, *five* **PUNICA**, *the Pomegranate*, is a low tree, or rather a shrub, with slender angular branches, beset with long thorns or prickles. The leaves are like those of the myrtle tree, or olive, only not so sharp, and are of a shining green, with reddish pedicles and veins. The flowers are rosaceous, consisting of five petals of a red or scarlet colour, in the middle of which there are many stamina, with their apices, and the calyx is also red, above an inch long, in the form of a bell, and divided into five pointed jaggs, which, after it is turned to a fruit, are placed round the navel at the top. Pomegranates are of various sizes, some being as big as large apples. The rind is pretty thick, hard, and brittle; before it is ripe it is green and smooth, but afterwards reddish and wrinkled, and last of all it becomes of a bay colour, and yellowish within, with an astringent taste; it is full of seeds disposed in various cells, and the pulp has a sweetish vinous flavour; though it is sometimes acid. There are several kinds, as the common pomegranate, the sweet, the wild, the double flowered, and the *American* double pomegranate. The first and second of these are hardy enough to resist the severest cold of our climate, in the open air; and, if planted against warm walls, the first sort will often produce fruit, which in warm seasons will ripen tolerably well; but they are seldom well tasted in *England*. These plants may be easily propagated, by laying down their branches in the spring, which in one year's time will take good root, and may then be transplanted where they design to remain; and the best season for this is the spring, just before they begin to shoot. The flowers always proceed from the extremity of the branches which are produced the same year, for which reason all the weak branches of the former year should be cut out, and the stronger should be lengthened according to their strength. The best time for this is the beginning of *October*.

MALICORUM, *or the rind of the Pomegranate*, has a bitterish austere taste, is very astringent, and will supply the place of oak bark, for tanning of leather, as well as of galls for the making of ink. It is good

in a diarrhoea, and all fluxes of the belly whatever, as well as in hemorrhages. It strengthens the tone of the parts, and sometimes proves an aperient as well as an astringent. The dose, in powder, is from half a dram to a dram, and in decoction to half an ounce.

BALAUSTIA, *Balaustines*, are the flowers of all sorts of pomegranates, with their flower-cups; but those of the double sort are generally chosen, because they are large, and have a great number of petals. The cup is not so long as in the first sort; it is however more flat and broad, and the colour is of a yellow purple. They are astringent, but not so much as the rind, and therefore they have been in frequent use in all sorts of fluxes whatever; but they are seldom met with in extemporaneous prescriptions, though often in shop medicines. The dose, in powder, is to a dram, and to half an ounce in decoction.

MALUS PERSICA VULGARIS, *the common Peach tree*, rises to a moderate height, and has a pretty thick stem, with many brittle branches, and a reddish and brownish bark. The leaves are thin, oblong, acuminate, crenated, and like those of the almond tree; but larger, and have a bitter taste, like those of peach kernels, though not so pleasant. The flowers appear in the beginning of the spring, before the leaves, and without pedicles; for they adhere to the tubercles of the branches, and are rosaceous, consisting of five broad petals, of a light reddish colour, and in the middle there are many longish stamina, that are either purple or white, with a pistil of the same length, that proceeds from a reddish calyx, divided into five acute segments, and turns to a fruit that is almost globous, tho' a little flattish on one side, and is furrowed according to the length, and covered with a thick, soft, whitish down, in many of the species; but some are smooth, of a yellowish herbaceous colour, and these are commonly called **NECTARINES**, which contain a woody, oblong, oval stone, consisting of two valves, deeply furrowed, and the pulp in some adhere very obstinately thereto, but in others it readily parts from it. When the bark is wounded, a gum will proceed from it like the plumb-tree gum.

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Some Peach trees are cultivated for the beauty of their flowers, as the peach tree with double flowers, the dwarf peach tree with single flowers, and the double flowering dwarf peach tree, though some place these two last among the almonds. The peach trees, that are cultivated for their fruit, are the white nutmeg peach, which has serrated leaves, and large open flowers, but the fruit is small and white, as is also the pulp at the stone, from which it easily parts. It is esteemed for being the soonest ripe.

The *early purple* PEACH TREE has leaves even at the edges, and the flowers are large and open; the fruit is large, round, and of a fine red colour, and the flesh is white, except at the stone, where it is very red. It is full of juice of a rich vinous flavour, and is an excellent peach; it is ripe towards the latter end of *August*.

The *large French Mignon* PEACH TREE has leaves that are even at the edges, and the flowers are large and open; the fruit is a little oblong, and has generally a swelling on one side. It has a fine colour, and the juice is very sweet, with a high flavour; the flesh is white, but very red at the stone, which is small; it is ripe towards the end of *August*. It is separated easily from the stone, and is one of the best sorts.

The *Belle Chevreuse* PEACH TREE has smooth leaves, and the flowers are small and contracted; the fruit is of a middling size, a little oblong, and of a fine red; the flesh is white, but very red at the stone, from which it easily parts; its juice is sweetish and rich, and it ripens in the beginning of *September*.

The *red Magdalen* PEACH TREE has deeply serrated leaves, with large open flowers, and the fruit is large and round, and of a fine red; the flesh is white, but very red at the stone, from which it readily parts. The juice is sweetish, and has a very fine flavour; it is ripe at the beginning of *September*, and is one of the best peaches.

The *Chancellor* PEACH TREE has leaves that are even at the edges, and has small contracted flowers; the fruit is shaped somewhat like the belle chevreuse, but

but is rounder, with flesh that is white, and melts in the mouth; it parts freely from the stone, where it is of a fine red. The skin is very thin, and the juice rich; it ripens in the beginning of *September*, and is one of the best sort.

The *BELLE-GARD* has leaves that are even at the edges, with small contracted flowers; but the fruit is very large and round, and is of a deep purple colour, next the sun; the flesh is white, melts in the mouth, and parts readily from the stone, where it is of a deep red; the juice is very rich. It ripens in the middle of *September*, and is an excellent peach.

The *Bourdin* PEACH TREE has leaves that are even at the edges, with small contracted flowers, and large round fruit, of a fine red colour next the sun; the flesh is white, melts in the mouth, and parts readily from the stone, where it is of a fine red; the juice is vinous and rich, and ripens in the middle of *September*.

The *Rosanna* PEACH TREE has leaves that are even at the edges, with small contracted flowers, and large fruit; the flesh is yellow, and parts readily from the stone, where it is red. The juice is rich and vinous, and it ripens in the middle of *September*.

The *Rambouillet* PEACH TREE has leaves that are smooth at the edges, with large open flowers, and fruit of a middling size, rather round than long, and divided by a deep furrow in the middle; it is of a fine red colour next the sun, and of a light yellow next the wall. The flesh is of a bright yellow, melts in the mouth, and parts readily from the stone, where it is of a deep red, and the juice is rich, with a vinous flavour; it ripens at the latter end of *September*.

The *Nisette* PEACH TREE has serrated leaves, with small contracted flowers, and large fruit, somewhat longer than round, of a bright red colour next the sun, and of a pale yellow on the other side; the flesh melts in the mouth, is full of a rich juice, and is very red at the stone, from which it parts. It ripens towards the latter end of *September*.

The *bloody* PEACH TREE bears fruit of a middling size, of a deep red next the sun, and flesh that is of a deep red to the stone; but it seldom becomes quite ripe

in *England*. Besides these, there are a very great variety of other species of peaches; but as these we have here described are the most usual sorts planted, we shall not tire the reader with a long catalogue of names, which he may never have occasion to peruse. A good peach ought to have a firm flesh, a thin skin, of a fine red colour next the sun, and of a yellowish cast next the wall; the flesh should be of a yellowish colour, full of juice, and high flavoured, with a small stone, and the pulp or flesh very thick.

All Peach trees have been originally obtained from the stones, which should be planted in autumn, on a bed of light dry earth, about three inches deep, and four inches asunder; in the winter the beds should be covered to protect them from the frost, and in the spring, when the plants come up, they should be carefully cleared from the weeds, as well as all the summer observing to water them when the weather is dry. They should remain here till the following spring, when they should be carefully taken up, without breaking the tender roots, and transplanted into a nursery in rows, three feet asunder, and eighteen inches distant plant from plant in the rows, observing to lay a little mud about the roots; they must also be watered in dry weather once a week, till they have taken root. Here they may continue two or three years, till they are transplanted, where they are to remain. When this is done, the downright roots must be pruned pretty short, and the bruised parts cut off, as well the the small fibres; but the heads should not be meddled with. These are generally designed for standards. As for the planting, budding, and management of peach trees that are to be placed against walls, we must refer the reader to books entirely devoted to the use of the common gardener, as it would take up more room than this treatise will allow.

The **NECTARINES** are properly peaches, though generally distinguished from them, of which the following are the most remarkable sorts; and indeed it may be doubted whether there are really any more or not.

Fairchild's early **NECTARINE TREE** produces fruit the soonest ripe of any we have; it is small and round,

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round, about the size of a nutmeg peach, and of a beautiful red; it has a very good flavour, and ripens towards the end of *July*.

The *Elruge* NECTARINE TREE has serrated leaves, with small flowers of a dark red or purple next the sun; but of a pale yellow or greenish colour towards the wall; it parts from the stone, melts in the mouth, and is ripe in the beginning of *August*.

The *Newington* NECTARINE TREE has serrated leaves, with large open flowers, and a fair large fruit, of a beautiful red next the sun, but of a bright yellow towards the wall; it has a very rich juice, and the pulp or flesh adheres closely to the stone, where it is of a deep red. It ripens in the middle of *August*, and has a better flavour than any of the rest.

The *scarlet* NECTARINE TREE bears fruit a little less than the former, of a fine red or scarlet next the sun, but of a paler red towards the wall; it ripens in the beginning of *August*.

The *Brugnon* or *Italian* NECTARINE TREE has leaves that are even on the edges, and small flowers, with a fair large fruit, of a deep red next the sun, but yellowish towards the wall; the pulp is firm, of a rich flavour, and closely adheres to the stone, where it is very red; it ripens towards the latter end of *August*.

The *Roman red* NECTARINE TREE has leaves that are even at the edge, and flowers with large fair fruit, of a deep red or purple colour next the sun, but has a yellowish cast towards the wall; the pulp is firm, of a rich flavour, and adheres closely to the stone, where it is very red. It ripens towards the latter end of *August*.

The *Murrey* NECTARINE TREE bears a middle sized fruit, of a deep red next the sun, but of a yellowish green towards the wall; it has a pretty good flavour, and ripens towards the end of *August*.

The *golden* NECTARINE TREE bears a handsome fruit, of a light red next the sun, and of a bright yellow towards the wall; the pulp is very yellow, has a rich flavour and closely adheres to the stone, where

it





The Mandrake.

it is of a faint red; it ripens towards the middle of September.

Temple's NECTARINE TREE bears a middle sized fruit, of a light red next the sun, and of a yellowish green towards the wall. The pulp melts in the mouth, and is of a white colour at the stone, from which it readily parts, and has a fine flavour; it ripens towards the end of September.

The *Peterborough*, or *late green* NECTARINE TREE, bears a middle sized fruit, of a pale green next the sun, but of a whitish green towards the wall. It has a firm well flavoured flesh in a good season, and ripens in the beginning of October.

The flowers have an aromatic bitter taste, and, when fresh, an infusion of half an ounce in water, or a dram when dry and sweetened with sugar, is a useful laxative for children. Peaches themselves agree very well with persons of hot constitutions, and costive, especially if they are eaten in a morning fasting. Peach kernels are bitterish, diuretic, and good against worms. The leaves have the same virtues, and the gum resembles gum arabic.

MANDRAGORA MAS, *seu* CANDIDA, *Mandrake*, has a thick long root, generally divided into two parts, and sometimes more; it is whitish without, or of a rusty ash-colour, and pale within. It has no stalk, though it has leaves a cubit in length, and a palm and a half broad, and sharp at both ends; among these pedicles arise stalks, a palm in length, on each of which there is a single flower, in the shape of a bell, consisting of a single leaf, divided into five segments; it is a little hairy, of a dirty white, or purplish colour, with a hairy green calyx, divided into five parts; from whence arises a pistil, fixed in the bottom part of the flower, that turns to a fruit, like a small apple, at first green, and then yellowish, fleshy, soft, of a strong nauseous smell, and in the pulp there are roundish flat seeds, somewhat in the shape of a kidney.

MANDRAGORA FOEMINA *seu* NIGRA, *female Mandrake*, has leaves like that of the former, but narrower, less, and blacker; the flowers are of a blue-

a blueish purple, and the fruit are paler, less, and in the shape of a pear. They both grow wild in *Italy* and *Spain*, as well as other hot countries, and delight in woody and shady places. With us they are cultivated in gardens, and the seeds are sown in a bed of light earth, soon after they are ripe; they come up in the spring, and in very dry weather they must be refreshed with water. They should remain here till the end of *August*, and then they should be transplanted to the places where they are to remain. The roots will continue sound for above fifty years; but as to the resemblance to a human form, as many assert, it is nothing but an imposture, owing to persons that would deceive the publick, who form the fresh roots of *Bryony* into such shapes, and show them for *Mandrakes*. Many wonderful things have been said of its virtues, by different authors; however, they all agree it is an narcotick, and, when taken in too large a dose, will produce dangerous symptoms. Some have given it from half a scruple, to procure sleep. Some affirm, that the leaves applied outwardly, as a cataplasm, will resolve hard swellings of the spleen.

MARRUBIUM, *Hoar-bound*, has a single woody root, which sends forth many fibres, and several stalks, to the height of a foot and upwards; these are hairy, square, branched, and the leaves proceed from the joints in pairs, which are placed opposite to each other; they are roundish, hoary, wrinkled, and crenated on the edges. The flowers likewise proceed from the joints, and surround the stalks; the calyx, or flower-cup, is hairy, streaked, and terminates in prickles; the flower consists of a single labiated leaf, of a whitish colour, whose upper lip is upright and forked, and the lower divided into three segments. The pistil is fixed in the back part of the flower, like a nail, and attended with four embryos, that turn to as many oblong seeds, contained in a capsula, that was the calyx of the flower. The whole plant has a strong disagreeable smell, and grows near highways, and on the sides of fields, in neglected places. It is aperient, powerfully resolves viscid humours, and by some is accounted a specific in a moist asthma.

MARRUBIUM NIGRUM, *black Hoar-bound*, has a perennial fibrous root, and hairy, square, light, branched, reddish stalks, with leaves that proceed from the joints in pairs, and are placed opposite to each other; they are like those of the *Balm*, or rather red *Archangel*, only they are rounder and blacker; they are hairy, soft to the touch, and wrinkled. The flowers likewise proceed from the joints, and consist of a labiated single petal, whose upper lip is hollow like a spoon, and the lower divided into three segments, of which that in the middle is biggest, and in the shape of a heart; the colour is purple, streaked with deeper lines of the same; the flower-cups are streaked, oblong, and divided into four or five sharp segments. The pistil is fixed in the back part of the flower, and is attended with four embryos, that turn into as many small oblong seeds, that are blackish when ripe, and contained in a tubulated capsula, with five sides, that was the calyx of the flower. It grows wild by the sides of hedges. The leaves are bitter, have a strong smell, and by some are accounted an excellent remedy in hypochondriac and hysteric disorders.

MARUM VERUM, *five* **MARUM CORTUSI**, *Syrian herb Mastick*, has a fibrous root, and a stalk that rises to the height of a foot, or rather several hoary downy stalks, with leaves like the end of a lance, a quarter of an inch long, two broad, and of a light green above. The flowers are like those of *German-der*, and consist of a single, labiated, purple petal, whose stamina are in the room of an upper lip; but the lower is divided into five segments, the middlemost of which is hollow like a spoon. The calyx is likewise like that of *German-der*, and the pistil is fixed on the back part of the flower, with four embryos, that turn into as many roundish seeds. This plant has the appearance of a shrub, and has a hot volatile smell. It is propagated by cuttings, in any of the summer months, on a bed of fresh light earth, observing to water and shade them, till they have taken root; after which they may be transplanted either into pots or borders of the same earth; but the greatest difficulty is to preserve it from cats, which will come from a great

distance, to tear this plant in pieces; for which reason, it is hard to preserve it near towns and cities. The best way is to plant large quantities thereof, and then they will not come near them. When they are placed in pots, they may be cut into any figure, for they will grow to near three feet high. It is said to be good in cold and moist diseases, and to be an excellent diuretick; though it is of little use with us, except in making herb-snuff. However, it is certainly better than Marjoram, and the dose of the powdered leaves is a dram.

MARUM, *herb Mastick*, is a small woody shrub, with many branches, and slender woody roots, with leaves like Thyme, but hoary, and which smell like Mastick. The flowers are white, and consist of a single labiated petal, whose upper lip is upright, and divided into three segments, but the lower into three in such a manner, that it looks like a flower with five leaves, and have a white down growing upon their oblong heads. This plant is propagated by cuttings, in any of the summer months, in a bed of light rich earth, observing to water and shade them till they have taken root, after which they may be transplanted into a light dry soil, in a warm situation. It produces great numbers of flowers in *July*, has an agreeable smell, and deserves a place in the borders of every good garden. The virtues are the same as those of the former, and it is undoubtedly an excellent cephalic.

MATRICARIA, *Feverfew*, has a white fibrous root, with several stalks, that rise to the height of a cubit and a half; these are strong, streaked, smooth, thick, and full of a spongy pith, with many leaves of a light green colour; they are conjugated, and divided into many segments, which are by some called wings. The flowers grow in umbels, on the top of the stalks; they are radiated, but not large, and the disk consists of many yellow florets, and the crown of white semi-florets, placed over the embryos of the seeds in a semi-spherical scaly cup. The seeds are oblong, small, streaked, and fixed in a bed at the bottom of the cup. The whole plant has a very strong smell, and is found wild upon dunghills and unculti-

uncultivated places, in many parts of *England*; it is likewise planted in gardens for medicinal purposes. They are propagated by seeds, which should be sown in the latter end of *March*, upon a bed of light earth, and when they are come up, they should be removed to nursery-beds, and placed about eight inches asunder, where they may remain till the latter end of *May*; then they may be taken up, with a ball of earth at their roots, and planted in the middle of large borders, where they will flower in *July* and *August*. It is an hysterical plant, and is excellent in uterine disorders. The dose, in powder, is from half a scruple to two scruples, and of the juice to an ounce or two. It is certainly a very good carminative, as it discusses wind, strengthens the stomach, and helps digestion. Outwardly, it is prescribed in fomentations, with camomile flowers.

MELILOTUS, *Melilot*, has a white, slender, tough root, with many short fibres, and generally several stalks, which sometimes rise to a cubit and a half in length; these are smooth, round, streaked, and weak, and the leaves are placed alternately thereon, by threes, on the same slender pedicle; they are smooth, oblong, denticulated, and of a dusky green. The flowers grow on long spikes, and are papilionaceous, small, yellow, and consist of four petals; these are succeeded by short, single, pendulous, wrinkled, naked pods, not hid in a calyx, as in trefoil, and they are black when ripe, containing one or two roundish seeds, of a yellowish colour. It is found near hedges, and among corn. It is seldom given inwardly, but is often used outwardly, and in glysters. It is said to be emollient, anodyne, and resolvent, and is used by some in all kinds of external inflammations.

MELISSA, *Balm*, has a round, long, fibrous, woody root, with stalks that rise to a cubit high, and upwards; these are square, almost smooth, branched, hard, stiff and brittle. The leaves are oblong, of a brownish green, and pretty much like those of calamint; but they are shining, covered with a little down, and dentated on the edges. The flowers grow at the places where the leaves proceed from the stalks,

and are somewhat verticillated, though they do not grow quite round the stalks; they consist of a single labiated petal, whose upper lip is roundish, upright, and divided into two parts; but the under lip is cut into three. The hairy calyx is divided into two parts, and the pistil is attended with four embryos, that turn to as many seeds, joined together, of a roundish shape, and contained in a capsula that was the cup of the flower. It is cultivated in gardens, and flowers in *June, July, and August*. It is propagated by parting the roots, either in spring or autumn, or by planting slips at the distance of eight or ten inches. Balm is said to be cordial, cephalic, and to fortify the stomach. It is taken in the manner of tea, is a little aromatic, and has done service in a lax state of the viscera.

MELISSA SYLVESTRIS, *wild Balm*, is nothing less than the former in its primitive state, before it is cultivated in gardens. This plant has a bad smell, and grows in woods, flowering in *May and June*. It is reckoned a vulnerary, and is said to be an excellent remedy against suppression of urine.

MELO VULGARIS, *common musk Melon*, is a plant, with stalks that creep along the earth, and are rough to the touch, as well as the leaves, which are smaller and rounder than those of Cucumbers. The flower consists of a single petal, in the shape of a bell, cut into several segments, exactly like those of a Cucumber, and some of them are barren, while others are fruitful, and turn into a fruit of an oval shape, and different sizes; the rind is harder than that of a Cucumber, pretty thick, variegated with green and ash-colour. The pulp is tender, moist, clammy, yellow, or red, and when ripe, has a very agreeable flavour. It is divided into three cells, containing oblong, flat, whitish yellow seeds, covered with a hard skin, containing an oily kernel, but is very white, and has a sweetish taste. There are several sorts of Melons, besides that already mentioned, as the *Portugal, or pocket Melon, the netted or wrought Melon, the great musk Melon, with a smooth green skin, and a green seed, the white Spanish Melon, the green fleshed Melon,*

Melon, the Cantaloupe Melon, the Zatta Melon, the Melon with a hairy skin, and the winter Melon. The seeds should not be sown till they are three years old, and it should be at two or three different seasons, the first of which is the latter end of *February*, when the weather is mild, on the upper side of a *Cucumber bed*, and the plants must be raised and managed in the same manner as *Cucumbers*. The second season is about the latter end of *March*, and they both should be planted under frames. Those that are designed to be raised under bell-glasses, must be sown about the latter end of *April*, if the season proves forward; but if it be cold, it had better be deferred somewhat later. There are particular rules required for their management; that are too long to be inserted here, and therefore I shall only observe, that when the fruit is fully grown, they must be carefully watched, to cut them at a proper time; and therefore they should be looked over at least twice a day; for, if they are left growing a few hours too long, they will lose much of their delicacy. If they are cut early in a morning, before the sun has warmed them, they will be much better flavoured.

The seeds of *Melons* are one of the greater cold seeds, and serve to make emulsions; but at present they are not so much taken notice of as formerly.

MENIANTHES, five TRIFOLIUM PALUSTRE, the *Buck-bean*, has a long, knotted, creeping root, which has fibres by intervals, and there are three leaves that grow on the same pedicle, that are of the same size and shape as those of beans, and smooth to the touch. Among these there arises a stalk to the height of a foot and a half, which is slender, smooth, green, and bears a tuft of flowers at the top, in the shape of a funnel, and of a whitish purple colour. Before they open they are red, and after they are open they divide into five pointed segments; their internal surface is covered with very slender, white, curled filaments, that appear like down. The cup of the flowers is in the shape of a mug, and dentated, and each flower contains five white stamina, with yellow apices; the pistil is placed in the middle, and is shorter and

greener than the stamina. These are succeeded with roundish or oblong fruit, that contains oval seeds like those of the Sun flower. This plant grows wild in marshes, and flowers in *May* and *June*. *Buck-Bean* has gained great reputation for its virtues, and is found very efficacious in the gout, king's-evil, the cachexy, and dropsy. In a fit of the gout, the patient must drink a glass of the decoction every four hours; but *Boerhaave* was relieved in this distemper, by drinking the juice mixed with whey. It will be likewise proper to apply the leaves that have been boiled, to the painful part, after the decoction is strained off. The seed is good against the moist asthma, for it incides the gross phlegm that stuffs the lungs. This plant is in such a reputation in *Germany*, that they give it in almost all diseases.

MENTHA VULGARIS, *garden, or spear Mint*, has a creeping root, furnished with fibres, that extend far and near; the stalks rise to a foot and a half in height, and are square, a little hairy, strong, and reddish. The leaves are placed by pairs opposite to each other, and appear at first sight like Balm; but those at the top of the stalk are longer, and more pointed, and of a deep green colour; they are also more deeply dentated. The flowers grow in spikes, and consist of a single labiated petal, whose upper lip is arched, and the lower divided into three parts; but both of them are so cut, that the flowers seem to be divided into four parts, the two lips scarcely appearing. Each flower is succeeded by four seeds contained in the flower-cup. Mint has a peculiar well known strong smell. It is cultivated in gardens, and flowers in *July* and *August*. Besides this, there is the *pepper Mint*, the *long leaved horse Mint*, *water Mint*, commonly called *water Calamint*, *orange Mint*, *spear-mint with a variegated leaf*, the *great round leaved water Mint with a variegated leaf*, *spear-mint with a rugged leaf and a strong scent*, and *narrow leaved Aleppo Mint*. They are all propagated by parting the roots in the spring, or by planting the cuttings in any of the summer months.

SPEAR-MINT is stomachic, cephalic, and carminative, and is excellent in the loss of appetite, retchings

ings to vomit, and weakness of the stomach. It resolves coagulated blood, eases pains of the cholic, and does a great deal of service in fluxes of the belly. It may be drank as tea, especially when the leaves are dry, and the infusion must be strong. Water Mint has a bitter, acrid, aromatic taste, is stomachic and diuretic, and, like the former, may be drank as tea. The juice is good against the gravel, stops vomiting, and hiccoughing, cures the gripes, and swelling of the stomach.

MENTHA ALBA, *free* **MENTASTRUM**, *Horsemint*, has a fibrous creeping root, and sends out stalks to the height of a cubit, and upwards, which are square and hairy. The leaves are almost round, wrinkled, and covered with a white wool. The flowers are like those of garden Balm, and are of a whitish red colour, with dentated flower-cups. Each flower is succeeded by a small black seed. The leaves have a bitter, acrid, astringent taste, with a strong smell, and it grows by the sides of brooks, and in moist places in most parts of *England*. It is said to kill worms, to help the moist asthma; and many apply a cataplasm made with this plant, to the affected part, against the hyp gout; they affirm it raises blisters, which when broken ease the pain.

MENTHA PIPERITES, *Pepper-mint*, has shorter and fuller spikes than the common Mint, but the leaves are like them, only they are covered with a short hairy down. This plant has been lately brought into esteem, and is of great use in flatulent cholics, and in many cold diseases; its effects are almost immediately felt; for it causes a glowing warmth to be felt throughout all parts of the body. It readily communicates its pungency to water, as well as to that which is distilled from it.

MERCURIALIS, *male and female French Mercury*. The male has a tender, fibrous, annual root, and sends forth stalks to the height of a foot, that are angular, geniculated, smooth, and branched. The leaves resemble those of pellitory, and are oblong, pretty broad, sharp, smooth, and green; they are placed by pairs opposite to each other on the stalk, and are

crenated on the edges; the flower-cup consists of one leaf cut into three segments, as well in the male as in the female. The flower of the male has no petals, but has from eight to twelve stamina collected into a spike. There are two embryos contained in a sort of purses, and, when they are ripe, there is in each a small oval seed.

The *female Mercury* resembles the male in all respects, except the flowers; for these produce neither fruit nor seed. The virtues are both alike, and they flower all the summer. The leaves are said to be aperient and laxative, and they are placed among the five emollient plants. It is sometimes made use of in glysters, and a syrup made of the leaves is a mild and useful laxative; the dose is two spoonfuls, which is to be given three hours before meals. Warts rubbed with this plant will frequently soon wither away.

MESPILUS APII FOLII SYLVESTRIS SPINOSA, *five SPINA ALBA, the White Thorn or Hawthorn*, is a shrub that has a pretty thick firm trunk, full of branches, and armed with strong thorns, that are much harder than the wood. The branches are strong and flexible, and the leaves are like those of pashley, and have a clammy taste. The flowers grow in tufts, and have pedicles about an inch and a half in length; they are white, have five petals, placed in the form of a rose, and reddish stamina, like those of the pear tree. The fruits, or haws, are a little larger than Myrtle-berries, are red when ripe, and hang in bunches. They have a black navel, and are full of a clammy soft sweetish pulp, wherein are two hard white stones. It grows every where in hedges, and flowers in *May*; the berries grow ripe in *September*, and continue a great part of the winter, when the leaves are falling off.

MESPILUS PYRIFOLIA, *five PYRICANTHA, the ever-green Thorn*, is a thorny shrub, covered with a blackish bark, whose branches are armed with thorns, whereof some are an inch in length, and others shorter. The leaves resemble those of the wild pear-tree, or rather the almond tree; some are oblong, and a little pointed, while others are almost round, smooth, and

and dentated on the edges, especially the lowermost. The flowers consist of several petals, of a reddish colour, and disposed in the form of a rose. The berries are like those of the hawthorn, and of a golden scarlet colour, growing together in bunches, and furnished with a sort of a crown. The pulp is a little tartish, and contains four or five whitish yellow seeds, of a triangular shape, and a little shining. It grows in the hedges in *Italy*, and the southern parts of *France*; but elsewhere it is cultivated in gardens. It flowers in *May*, and the berries grow ripe in autumn. Children are very fond of them, and they have the same taste and properties as haws.

MILIUM, *Millet*, has many fibrous, and strong, whitish roots, that send forth stalks to the height of two or three feet, which have several knobs. The leaves are large, long, and about an inch broad, in the shape of those of reeds; they are covered with a sort of thick down, at the places where they surround the stalk, after which they become smooth; the flowers grow in loose panicles at the top of the stalks, and are generally yellow, though sometimes blackish; they are composed of three stamina, that proceed from the middle of the flower-cup, which generally consists of two leaves. When the flowers are fallen off, they are succeeded by oval grains, that are yellowish or white, hard, shining, contained in three sorts of thin tender shells. These plants were originally brought from the eastern countries, where they are still greatly cultivated, and from whence we have the grain, which is highly esteemed by many for making puddings. It is a common aliment in the eastern countries, where they boil it in milk, and it has the same virtues as rice. It is good in disorders of the breast, and obstinate coughs; but it is a little binding and windy.

MILLE FOLIUM VULGARE, *Yarrow*, or *Nose-bleed*, has a woody, fibrous, blackish, creeping root, from whence proceed a great number of stalks, to the height of a foot, or a foot and a half, that are stiff, angular, hairy, reddish, and branched at the top. The leaves are divided and subdivided into a vast number of segments, adhering to a long rib, and have some

resemblance to those of camomile; but they are more stiff, and somewhat like the feathers of a bird. The flowers are collected into round umbels, each of which is radiated, whitish, and placed in a scaly cylindric calyx, and are succeeded by very small seeds. It grows in uncultivated sandy places, where the leaves generally lie close to the ground till the stalks begin to rise. It is called *Noose-bleed* by the country people, because a sprig of it put up the nose will bring away a little blood. It flowers in *May* and *June*, and has an acrid, bitter, aromatic taste. It is a vulnerary plant, and is said to cure wounds, tumours, and inflammations without repulsion.

MYAGRUM, *Gold of Pleasure*, has a fibrous root, a little woody, which sends forth a stalk to the height of a cubit and upwards, from whence proceed several cylindric, strait, slender branches, a little downy, and full of a spongy pith. The leaves are longish, pointed, soft, of a palish green, slightly dentated on the edges, and their bottoms surround their stalk in such a manner, that the sides represent two wings or ears. The flowers consist of four petals, placed in the form of a cross, and of a yellowish colour; the pistil arises out of the calyx, and afterwards becomes a fruit in the shape of a pear, with one cell, including an oblong seed, and two empty cells at the point. It is an annual plant, that decays as soon as the seeds are ripe, and grows wild in several parts of *Europe*. The oil of these seeds is emollient, and moderately heating, and it is given inwardly in a painful costiveness.

MYRRHIS, *Jacobi Cicily*, has a long, thick, white, soft, and somewhat spongy root, with stalks that rise to the height of four or five feet, which are branched, downy, and hollow. The leaves are large, and winged like those of hemlock, but whiter, and often marked with white spots; they are soft to the touch, a little downy, and have the smell of chervil. The flowers grow in umbels on the tops of the branches, and are composed of five unequal petals, disposed like those of the flower-de-luce. The calyx turns to a fruit, composed of two seeds, resembling the bill of a bird, and are gibbous on one side, but plain on the other.

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It may be propagated at the beginning of *March*, by sowing the seeds on a bed of light earth in a shady situation; and when the plants come up, they should be transplanted into the like earth in a moist shady situation, about two feet asunder. Some use the leaves as a sallad, and think it is as good as common chervil; it flowers in *June*, and the seed is ripe in *July*. It is looked upon as a pectoral, and the leaves when dried in the shade, and smoked like tobacco, help those that are troubled with an asthma.

MYRTUS MINOR VULGARIS, *Box-leaved Myrtle*, is a shrub that has a hard woody root, that sends forth a great number of small flexible branches, furnished with leaves like those of box, but much less, and more pointed; they are soft to the touch, shining, smooth, of a beautiful green, and have a sweet smell. The flowers grow among the leaves, and consist of five white petals, disposed in the manner of a rose, and have a calyx cut into five segments. There is a great number of stamina, which have a fine smell, and when the flower is fallen off, the calyx becomes an oval oblong berry, adorned with a sort of crown, made up of the segments of the calyx. The berry is green at first, but grows black when ripe, and is smooth, juicy, and divided into three cells, containing hard seeds in the shape of kidneys. This sort of myrtle is the most common in the gardens of the northern countries, and is propagated from cuttings, the best season for which is in *July*. The shoots should be six or eight inches long, and the leaves on the lower part should be stripped off above two inches high, and the part twisted which is to be placed in the ground. They should be planted in pots, two inches distant from each other; the earth should be pressed close about them, and there should likewise be some water to settle it. The pots should be plunged in old dung, or tanner's bark, and shaded with mats in the heat of the day, watering them occasionally. In about a month's time they will take root; and, towards the beginning of *September*, they should be removed to a place sheltered from cold wind, where they may remain a month, and then be removed to the

green house. At the beginning of the next *April*, they should be taken out carefully, and placed in separate pots, with a ball of earth at the root.

MYRTUS BRABANTICA, *Dutch Myrtle*, is a small shrub, with a hard flexible root, and rises to the height of a cubit or upwards; it has the look of a small willow, for which reason it is called by some Sweet Willow. There are male and female flowers on different plants, and those of the male are oblong, loose, scaly catkins, and in each of the scales there is a flower in the shape of a half moon, but without petals, though there are from five to six stamina. The female flowers have no stamina, but an oval pistil, supported by two styles, which afterwards changes to a berry, containing one roundish seed. It grows plentifully upon bogs in many parts of *England*, and flowers in *May* and *June*; and the seeds grow ripe in *July* and *August*. Where this shrub grows in plenty, it is so fragrant, especially after a shower of rain, as to perfume the air at a great distance, during the spring and summer. The leaves have been said to have many virtues, and they are still used in some places to kill worms.

NARCISSO-LUCOIIUM, *Snow-drop*, has a bulbous root, composed of several white coats, except the outermost, which is brown, and underneath there are whitish fibres. It sends forth three, four, or five leaves, like those of leeks, which are green, smooth, and shining; among these arise an angular, furrowed, hollow stalk, six inches high, clothed with leaves as far as the middle, which form a kind of white sheath. It generally bears but one flower at the top, though sometimes two, but seldom three. The sheath of the flower is oblong, blunt, compressed, and opening sideways becomes a dry skin; the flower itself has three oval oblong petals, which are spread open, and are equal; the nectarium is seated in the middle, and is cylindrical, blunt, and bordered. The pistil is placed in the center of the flower, attended by six stamina, and afterwards becomes an oval capsula, with three cells full of roundish seeds. They are of two sorts, the single and the double; and they are valued

for

for their early appearance, which is commonly in *February*. The roots should never be planted single, because the flowers make the best appearance when they grow in bunches. When there are twenty or more roots together, they have a very good effect. The root is of no use in medicine.

NASTURTIIUM HORTENSE, *garden Cresses*, have a single, woody, white root, that is not so acrid as the leaves. This root sends forth several stalks, to the height of a foot, or a foot and a half, that are round, smooth, solid, branched, and covered with a sort of blueish dust, that will readily come off. The leaves are oblong, deeply cut, and have no disagreeable taste. The flowers grow on the tops of the branches, and consist of four petals, placed in the form of a cross, and of a whitish purple colour. The pistil, which rises from the center of the flower-cup, becomes a roundish smooth fruit, divided into two cells, containing small, oblong, yellowish seeds. It is cultivated in gardens as a sallad herb, and is in most esteem in the winter, and in the spring. During the winter they must be sown on a gentle hot-bed, covered with mats or glasses; in the spring upon warm borders, and in the summer upon those that are shady. They attenuate and cut gross thick humours, and are good in obstructions of the viscera. It may be eaten plentifully as a sallad, and therefore nothing need to be said of the dose.

NASTURTIIUM AQUATICUM, *Watercress, or Cresses*, have a small white root, full of knots, from each of which several capillary fibres proceed, that enter into the water. The stalk arises to the height of a foot, and is crooked, thick, hollowed, furrowed, smooth, branched, and of a green colour, with a reddish cast. The leaves are almost round, juicy, of a greenish brown colour, and have a biting agreeable taste. The flowers grow on the top of the stalks, and are small, white, composed of four petals in the form of a cross, with several yellow stamina and apices; these are succeeded by pods, that are a little crooked, and divided into two cells full of roundish, small, reddish seeds, of an acrid taste. It grows on the sides of brooks and ditches, and flowers in *July* and *August*. It is used as a
sallad

salad herb, especially in the winter. When the leaves first appear, they are almost round, but afterwards they are cut like those of rocket. It has much the same virtues as garden cresses, but stronger, and is accounted one of the best antiscorbuticks in these parts of the world.

NEPETA, *Nep.* or *Cat-mint*, has a woody root, divided into several branches, and sends forth a stalk three feet high and upwards, which is square, hairy, branched, reddish near the ground, and the upper part whitish; the branches are always produced opposite to each other by pairs; the leaves are like those of the nettle or betony, and are serrated on the edges; they are pointed, downy, whitish, and have long pedicles, and have a strong smell of mint, with a biting acrid taste. The flowers grow on the tops of the branches, where they are collected into six spikes; they are purple or whitish, and they each consist of a tube, whose upper lip is cut into two segments, and the lower into three; the middle segment is broad and hollowed like a spoon, and elegantly crenated on the edges; it is sustained by a calyx, in the shape of a horn, and succeeded by four naked oval seeds. It is called cat-mint, because the cats will not suffer it to grow, and is propagated by sowing the seeds in *March*, in beds or borders of common earth; but it is found wild in many parts of *England*. It is aperient, has all the virtues of common mint, and may be drank in the manner of tea. When the cats eat too much of it, it will make them drunk; but, what is very remarkable, if it be raised from seeds the cats will not touch it.

NICOTIANA MAJOR LATIFOLIA, *the greater broad-leaved Tobacco*, has a white fibrous root, which sends forth a stalk to the height of five or six feet, as thick as one's thumb, and round. It is hairy, and full of a white pith. The leaves are large, without pedicles, and placed alternately on the stalks by their large appendages; they are hairy, full of nerves, a little pointed, clammy to the touch, and of a pale green, inclining to yellow. They are divided into several branches at the top, that support flowers in the shape of a bell, divided into five deep segments, as well as the

the calyx, which expand like a star. They are of a purple colour, and the apices of the stamina are sprinkled with a fine powder of an ash colour. The embryo becomes an oblong, roundish, membranaceous fruit, divided into two cells full of reddish seeds, that are exceeding small, in proportion to the bigness of the plant. It is a summer plant with us, though it will sometimes, in moderate winter, continue all the year. It is known by the *American* planters, under the title of *Oroonoko Tobacco*; but it is not in such esteem with the *English*, as the other sorts. In *Brasil* it flowers continually, and will live ten or twelve years.

NICOTIANA MAJOR ANGUSTIFOLIA, the greater narrow-leaved Tobacco, differs only from the former in their leaves, which are narrower, and more pointed, and are fixed to the stalk by pretty long pedicles.

NICOTIANA MINOR, the lesser, or common *English Tobacco*, has a single thick root, sometimes divided into several tender white fibres, and sends forth a stalk to the height of two feet, which is hairy, solid, sometimes as thick as one's finger, branched, and clammy to the touch. The leaves are rounder than those of the former sorts, and are placed alternately on the stalks; they are flat, blunt at the end, of a greenish-brown, and have short pedicles. The flowers are numerous on the top of the branches, and are divided into five segments like the former; they have five stamina, whose apices are of an ash colour, as well as the pistil; they are less than those of the former kind, and the colour is of a greenish yellow. The calyx is hairy, clammy and divided into five parts. The flowers are succeeded by roundish capsula, in the form of a navel, and, when ripe, open into two parts, and are full of a vast number of yellow tawney seeds. Besides these, there are other sorts, as the greater narrow-leaved perennial tobacco; the lesser tobacco with larger and rougher leaves; the great broad-leaved tobacco with white flowers, and a short seed vessel; the dwarf tobacco with a primrose leaf; and the small tobacco with a leaf in the shape of a heart, and a flower with a longer tube. The first of these sorts is most common in *England*, and is generally raised by the

the gardeners near *London*. They were all brought originally from *America*, and at first were in high esteem for their medicinal qualities. It is called tobacco from the island of *Tobago*, from thence it was brought in the year 1560.

The taste and smell of tobacco is well known, as well as its common use. Some use it as a vomit, which should be never done, except in cases of necessity. The watery extract made by long boiling, and preserved dry, has a cleansing anodyne quality, and is excellent for appeasing an asthmatic cough. It may be taken in broth, or with a stomachic remedy to four or five grains. In some delicate constitutions, it will occasion a retching to vomit, which may be easily remedied with a draught of burnt wine. Outwardly, the plant is cleansing and healing, and will soon cure malignant ulcers, when other things fail. Some make an ointment of tobacco for the killing of lice, but it should be used very cautiously. When it is beaten into a cataplasm with vinegar or brandy, it will remove hard swellings of the liver and spleen, as we learn from the *Edinburgh* essays. Some recommend the smoaking tobacco in the time of the plague, and other infectious diseases. I was witness to the efficacy of smoaking tobacco in a person, who was thereby cured of a dry asthma, when all other remedies had failed. Having smoaked part of a pipe, merely for good company sake, he found such an abatement of his cough, as induced him to pursue it, which at last effectually cured him, by gradually bringing off his lungs the coagulated matter, with which they were clogged. However, this may not succeed in every constitution; and it will be prudent not to continue it, if after once or twice smoaking, the patient has not some substantial encouragement to proceed, which may compensate for the sickness tobacco always occasions those, who are not used to smoaking it.

NIGELLA ROMANA, *Roman Fennel flower*, has a root with many furrowed slender stalks, a foot in height; the leaves are pretty large, green, and cut into slender segments. The flowers are placed at the tops of the branches, distinct from each other, and are composed
of

of five petals, of a pale colour, and disposed in the form of a rose. There are several stamina in the middle, surrounded with a crown, and are succeeded by a membranous fruit, and divided into several cells, that terminate in horns. This plant is cultivated in gardens, and flowers in *July, August, and September.* The seeds brought from *Italy* are the best, and should be fresh, large, and of a fine yellow colour, or black. It is resolvent, discutient, and strengthening, and is proper for correcting the impurities of the stomach, breast, and kidneys. It is good against catarrhs of the head, the head-ach, arising from thence, the vertigo, and obstructions of the nose, either in fumigations, or snuffed up when powdered. The dose inwardly is from one scruple to a dram. It is of great use among the *Germans*, but neglected by us.

NOLI ME TANGERE, *frut* **BALSAMINE**, *Balsamine*, has a root that runs level with the ground, and sends forth a stalk to the height of a foot and a half, which is tender, of a bright green, smooth, shining, light, branched, geniculated by intervals, with tuberosities. The leaves are placed alternately, and are deeply dentated on the edges. From the places, where the leaves join to the stalk, there proceed long pedicles, that bend down to the ground, which are divided into three or four branches, on which hang small flowers, with four unequal petals, supported by two small green leaves; but the flower is yellow, representing a kind of a sea-monster, with a small body, and a slender short, crooked, pointed tail, like an ox's horn, sprinkled with deep red spots; the mouth is wide, and in the middle there are several stamina, of a whitish colour. They are succeeded by long, slender, knotted fruit, of a whitish green, streaked with green lines, bending to the ground. They open as they grow ripe, and when the wind blows a little stronger than ordinary, or by the least touch, they shoot out their seeds, at the same time writhing themselves like worms; the seeds are either ash-coloured, brown, or red. Those that are not used to this plant, are always startled when the seeds burst out in the above manner; and from its not bearing to be touched without this effect, it is called

Noli

Noli me tangere, that is, *Touch me not*. It grows wild in some places, and flowers in *June*, and it is also cultivated in gardens, for the diversion it affords. It is propagated by the seeds, and if sseffered to cast them, it will come up every spring without any care; but it delights most in moist shady places. It is very aperient and diuretic, and frees the kidneys from gravel.

NUMMULARIA, *Moneywort*, has a very creeping slender root, and sends forth several long, slender, angular, branched stalks, that creep on the ground, and whose leaves are placed in pairs opposite to each other; they are about as broad as one's finger, and are almost round, though a little curled, and of a yellowish green; where the leaves join to the stalk, the flowers proceed, which are large, and consist of a single petal, cut into the shape of a rose. On some branches there are three leaves, and as many flowers at each knot. They are succeeded by small round fruit, containing seeds hardly visible. It is called moneywort from its roundness of the leaves, and is common in moist places, and by the sides of ditches. It begins to flower in *May*, and continues to do so most of the summer. The leaves are astringent and vulnerary, and proper to stop hæmorrhages, both inwardly and outwardly. The dose of the juice is from one ounce to three, and, in decoction, from one handful to three. *Boerhaave* recommends it greatly against the hot scurvy.

NYPHÆA ALBA, *white Water-lily*, has a long root, as thick as one's arm, and sometimes as the leg, full of knots, of a brown colour without, and white within; it is fleshy, spongy, full of clammy juice, and adheres at the bottom of the water to the earth, by several fibres. It sends forth large roundish leaves, in the shape of a heart, that are thick, fleshy, veinous, and of a whitish green colour on the top, and of a brownish green beneath, and swims on the surface of the water; these are supported by long pedicles, as thick as a child's finger, which are cylindric, reddish, tender, juicy, and spongy. The flowers are large and broad when blown, consisting of several leaves, disposed in the form of a rose, of a fine white colour, but of little or no smell. The flower-cup consists of five whitish leaves, and there

are

are other leaves on the edges, of a whitish green colour. There are a great number of stamina, with a pistil that turns to a globular fruit, like the head of a poppy, divided into several cells, full of oblong, blackish, shining seeds. It grows wild in marshes and standing waters, and flowers in *May* and *June*.

NYMPHÆA LUTEA MAJOR, *the great yellow Water lily*, differs from the former, in having leaves not quite so round, and in the flower, which is yellow, besides which the fruit is of a conical shape, and contains larger seeds. It is found in the same places, and flowers at the same time as the former. The roots have both the same virtues, and have a clammy bitterish taste. They are proper in heat of urine, want of rest, and all internal inflammations, but are now seldom used. The powder of the dried root is given from a scruple to a dram.

OLEA MAJOR, *five* **HISPANICA**, *the manured Olive tree*, has a trunk that is knotted, and more or less high, with a smooth ash-coloured bark, and yellowish wood, that has somewhat of a bitter taste. The leaves are oblong and narrow, almost like those of willow; they are pointed, thick, fleshy, hard, of a greenish yellow above, and whitish below, but without down; they have very short pedicles, and are generally placed by pairs opposite to each other. The flowers proceed from the places where the leaves are joined to the stalks, and grow in whitish branches, like those of the alder; they consist of a single petal, the lower part of which is hollowed, and the upper is divided into four parts; the embryo of which is fixed in the center of the flower-cup, and becomes an oval, green, fleshy, succulent fruit, of different sizes; for in *Spain* it is as big as a middling plumb; whereas in *Italy* and *Languedoc*, it scarce arrives at the size of a common acorn. This is the olive, which is at first green, then yellowish, and at length blackish, when it is full ripe; though there are some in *Spain* that turn white. They are oily, have an acerb disagreeable taste, and contain an oblong stone, which is very hard, and within it is a kernel of the same shape. It is cultivated in the southern parts of *Europe*, and delights in dry, marly places, that are exposed

exposed to the south or east; and it flowers in *June* and *July*. This tree continues a long time, and the wood which has a fine smell, will burn as well green as dry. They produce a large quantity of fruit, of which they make oil-olive, or salad-oil, well known all over *Europe*. They are planted out of curiosity in *England*, in pots or cases, but must be removed into the greenhouse all the winter. There are several sorts of olives that differ in shape, colour, size, and juice. They are pickled, and then become agreeable to the taste; and are well known in *England* by the name of pickled olives; they are then said to create an appetite, and strengthen the stomach.

ONOBRYCHIS, *Cock's-head*, or *Sain-foin*, has a long, hard, woody root, black without, and white within, which sends forth several strait strong stalks, about a foot in height, and of a reddish green colour. The leaves which are like those of vetches, but smaller, are green above, white and downy below, pointed, and placed by pairs on one side. The flower is papilionaceous, and the pistil rises out of the downy flower-cup, which afterwards turns to a crested pod, in the shape of a cock's-comb, and is rough, with prickles; each of these contain a seed, in the shape of a kidney, which has a pretty good taste when it is green. *Sain-foin* is a *French* word, which signifies wholesome hay, and is so called, because it is thought to fat all sorts of cattle the soonest of any other. The hay made of it is accounted among us the best sort of food for most cattle, especially in the spring, there being no danger attending it, as there is in clover; it breeds abundance of milk, and the butter that is made of it is very good. There is a sort with a deep red flower, which, when disposed in the large borders of pleasure gardens, afford an agreeable variety; for they are of a beautiful colour, grow in long spikes, and continue a great while. Some observe, that if *Sain-foin* be carefully gathered, well dried, and kept in boxes, it has the smell of tea, in-somuch that it has been mistaken by good judges for green tea; but then it must be gathered before it flowers.

OPULUS,

OPULUS, *ſeu* **SAMBUCUS AQUATICA**, *Marſh*
elder, or *Gelder-roſe*, has a thick, firm, white root, that
 ſends forth a ſtalk to the height of five or ſix cubits,
 divided into ſeveral branches, like thoſe of the elder
 tree, and is knotted by intervals; it is covered with a
 ſmooth aſh-coloured bark or rind, is full of white
 ſpongy pith; and is very tender and brittle. The
 leaves proceed from the knots, and are large, angular,
 and like thoſe of the maple tree. The flowers conſiſt
 of a ſingle petal or leaf, divided into five parts at the
 top, and expanded in the form of a roſe. Thoſe about
 the circumference of the umbel are larger than the
 reſt, and of a fine white, with a calyx that proceeds
 from the middle of the cup, but they are barren. Thoſe
 in the middle or centre are ſmaller, open later, and in
 their bottom there is a hole that receives the point of
 the calyx, and they are of a yellow colour. This turns
 to a berry, a little larger than that of the common
 elder, which is ſoft and red when ripe; in each of
 theſe there is a flat red ſeed in the ſhape of a heart.
 This ſhrub delights in moiſt woods, and on the banks
 of rivers, and it flowers in *May*; but the berries are
 not ripe till autumn, and they continue all the winter.
 There is another *Gelder-roſe*, that differs from the for-
 mer, only in having the flowers collected into a globe,
 and is common in old gardens in moſt parts of *England*.
 At a diſtance the flowers reſemble ſnow-balls, for
 which reaſon it is called in ſome countries the *Snow-
 ball tree*. It is of no uſe in medicine.

ORCHIS, *ſeu* **SATYRIUM**, *Fool-ftones*, has a root
 compoſed of two tubercles almoſt round, which are fleſhy,
 and of the ſize of nutmegs; whereof one is full and
 hard, and the other wrinkled and ſpongy. At firſt it
 ſends forth ſix or ſeven leaves, that are long, pretty
 broad, ſmooth, and like thoſe of the flower-de-luce, but
 ſmaller, and generally marked at the top with browniſh
 red ſpots. The ſtalk riſes to the height of a foot, and
 is round, ſtreaked, and encompassed with one or two
 leaves; on the top there is a long ſpike of beautiful
 purple flowers, that are whitish towards the center,
 and ſprinkled with ſpecks of a deeper purple. Each
 flower is compoſed of ſix unequal petals, of which the
 five

five uppermost compose a sort of a helmet; and the lower petal, which is larger than the rest, has a sort of a head or helmet at the top, and terminates in a tail, or sharp point like a spur. The calyx becomes a fruit, with three sides, and is divided into three cells, containing many small seeds. It flowers towards the end of *April*, and the beginning of *May*, and is found in many parts of *England*.

ORCHIS LATIFOLIA, *feu* MAJOR, *Dog's-stones*. This plant has a root composed of two bulbs, or fleshy tubercles, but larger, and in the shape of large olives. The stalk rises near the height of a cubit, and has long pyramidal flowers at the top, which are large and beautiful, whitish within, and sprinkled with purple spots; but they are reddish on the outside, and represent a man in armour, without hands or feet. The leaves are big, long, and broad, and are roundish at first when they rise out of the earth in *November*. The seed is like that of the former, and flowers in *May*. There are several other sorts of these plants, the under part of whose flower represents several shapes, as a naked man, a butterfly, a fly, a drone, a pigeon, an ape, a lizard, and a parrot; and these all grow wild in several parts of *England*; but deserve a place in every good garden. The *Turks* have a preparation of a certain root that is called *lalep*, which they make use of to recover their strength. It is supposed to be a kind of orchis, and the following preparation of this root will answer the same purposes. Take the roots or bulbs of orchis, that are well nourished, and after they are skinned, throw them into cold water; after they have been there some hours, boil them in a sufficient quantity of water, and then strain them; this done, put them on a string, and dry them in the air; this is best done in a dry hot season. They will become transparent, very hard, and will resemble pieces of gum tragacanth. If they are kept in a dry place they will always remain good, and may at any time be reduced to a very fine powder. A scruple of this, put by little and little into boiling water, will entirely melt, and will be sufficient for a pint of water; it may be rendered more agreeable, by putting in a little sugar, and is exceeding useful when

when mixed with milk, in all diseases of the breast; for it is very emollient, and will abate the sharpness of the humours; it is excellent in consumptions, and bloody fluxes of the bilious kind.

OREOCELINUM, *frut* **APIUM MONTANUM**, *Mountain Parsley*, has a root consisting of many fibres, adhering to one head, which creep greatly in the earth; they are blackish on the outside, white within, and are full of mucilaginous juice. It has a single ferulaceous stalk, that rises to the height of four or five feet, which is furrowed, and divided into wings. The leaves proceed as well from the root as the stalk, and are large, but like those of the common parsley, only they are more firm and smooth. The flowers grow in umbels at the top of the stalks and branches, and are small, whitish, and consist of five purplish petals, disposed in the form of a rose. These are succeeded by a fruit, which was the calyx of the flower, composed of two seeds, that are oval, flattish, radiated on the back, and bordered with a membranous leaf, of a reddish colour. It grows in mountainous places, where there are pastures.

OREOCELINUM, *frut* **APIUM MONTANUM MINUS**, *smaller mountain Parsley*, has a pretty thick, soft root, that is fibrous on the upper part, and white both within and without; the stalks rise to the height of a cubit and upwards, and is pretty thick, firm, furrowed, knotted by intervals, reddish and branched. The leaves lie on the ground, and are like those of garden parsley. The flowers grow in umbels on the top of the stalk and branches, and are of a white colour. The seeds that succeed them have a more acrid taste than the leaves. It delights in mountainous and sandy places, and flowers in *July* and *August*. The seeds are accounted an aperient, and proper to open the obstructions of the liver and spleen; they are also diuretic, and free the kidneys from gravel; but they are seldom used among us.

ORIGANUM VULGARE, *wild Marjoram*, has a slender, woody, fibrous root, creeping obliquely into the ground, which sends forth several stalks, that rise to the height of two or three feet, and are hard, square,

square, and downy. The largest leaves resemble those of common calamint, and the lesser those of marjoram; they are downy, have an agreeable smell, and an acrid, aromatic taste. The flowers are collected into scaly spikes, and are labiated, consisting of a single petal, whose upper lip is erect, roundish, and divided into two segments, but the lower into three. The pistil arises from the calyx, and is fixed in the back part of the flower like a nail; it is attended with four embryos, and turns into as many small seeds, contained in a capsule, that was the calyx of the flower. It grows wild on dry chalky hills, and on gravelly soil, in several parts of *England*; and it flowers in the summer. Wild marjoram is diuretic, and diaphoretic, and may be used in the manner of tea in the asthma, and a violent cough. The powder of the leaves and the flowers dried in the shade are cephalic, and being taken as snuff, will make the nose run considerably. It helps digestion, dissolves wind, and is employed externally in baths for the feet.

ORNITHOPODIUM MAJUS, *the greater Bird's-foot*, has a small, white, single, fibrous root, accompanied with several grains or tubercles, with several flexible, weak, branched, round, hairy stalks, that seem to creep on the ground. The leaves are less than those of the *Bastard Sena*, and the flowers are small, papilionaceous, and disposed in spikes on the top of the branches; the pistil arises out of the calyx, which afterwards becomes a hooked jointed pod, that is generally undulated, and at every joint there is a round seed; and several of these pods grow together in such a manner, as to resemble the foot of a bird. It flowers in summer, and generally in *June*, and delights in dry cultivated places. The whole plant is accounted aperient and diuretic, and when powdered, the dose is a dram in a glass of white wine; but it is not now in use.

ORYZA, *Rice*, has a root like that of wheat, and furrowed stalks, that rise to the height of three or four feet, which are thicker and stronger than those of wheat or barley, and knotted by intervals. The leaves are like those of reeds in shape, but they are fleshy

belly like leeks. The flowers which grow on the tops are of a purple colour, and are disposed into panicles. The seeds are almost oval, white, transparent, hard, and are contained in a yellowish, rough, furrowed, angular, downy capsula, somewhat like barley; they are placed alternately on each side of the branches. This plant is cultivated in hot countries, in moist marshy land, and the use of the seeds is principally for food. However, they destroy the acrimony of the humours, and are good in fluxes of the belly. Rice serves instead of bread in most of the eastern countries, and is their principal nourishment. It is now planted in *South-Carolina*, where great quantities have been produced, and as good as in any other part of the world. It is chiefly used here for puddings, and to make rice-milk.

PÆONIA MAS, *Male Peony*, has an oblong, thick, tuberose root, brown without, and pale within, and is often divided into several branches; it sends forth stalks to the height of two or three feet, that are a little reddish, and divided into branches. The leaves are large, and composed of several other leaves, almost like those of the hazel tree; but they are broader and thicker, and of a shining, brownish green colour; they are also covered underneath with a down, and have long reddish pedicles. The flowers grow on the tops of the stalks, and are large, consisting of several petals, that expand in the form of a rose, sometimes of a purple colour, and sometimes of a palish red. The calyx is composed of five leaves, and in the middle there are purple stamina with saffron coloured apices. They are succeeded by fruit, composed of several small, white, downy, shining, crooked horns, that open when they are ripe, and contain many globulous seeds, that are red at first, and afterwards of a dark blue or black. It flowers at the beginning of *May*, and they fall off soon afterwards. It is cultivated in gardens for the sake of the roots, which are used in medicine. They are propagated by parting the roots, and are extremely hardy, for they will grow in any soil or situation: the best season for this is in the beginning of *September*.

PÆONIA FOEMINA, *female Peony*, has a root composed of several tubercles, connected together with fibres, and sends forth a tall stalk, that has scarce any redness at all; the leaves are of a greenish pale colour above, and whitish, and a little downy underneath. The flowers are like those of the former, but neither they nor the fruit are so large. This is a very common sort, and is to be met with almost every where in gardens. The *Male Peony* is principally used in medicine, and the roots and seeds have been thought by many to be a specific against the falling-sickness, convulsions, and the palsy. They are reduced to powder, after they have been dried in the shade, and then the dose is a dram or two; or an ounce of the roots is given in decoction, while they are fresh.

PALIURUS, *Christ's-thorn*, has a hard woody root, with a stem that grows so high, that it sometimes deserves the name of a tree. The branches are long and thorny, but those that are near the leaves are smaller, and not so prickly as in other places. The leaves are almost round, pointed, and of a dark green, with a reddish cast. The flowers are small, yellow, grow on the tops of the branches, and are generally composed of five petals, in the form of a rose. The pistil arises from the flower-cup, which turns to a fruit almost in the shape of a bonnet, having a shell that is nearly globular, divided into three cells, on each of which there is a single roundish seed. This shrub grows wild in the hedges of *Italy, Spain, Portugal*, and the south of *France*, from whence its seeds are procured. It flowers in *May and June*, and the fruit is ripe in the autumn. It is called *Christ's-thorn*, because they suppose his crown of thorns was made of the branches of this tree. It may be propagated by laying down the tender branches in the spring, which will take root in a year's time; the best season for transplanting them is in autumn, soon after the leaves begin to decay. The fruit is said to be diuretic, and to help the moist asthma, by promoting expectoration; but it is not in use among us.

PAPAVER CORNUTUM, *scu CORNICULATUM*, *Yellow horned Poppy*, has a root as thick as

one's

one's finger, which is long, blackish, and full of a yellow juice, as well as all the plant, which has a particular taste and smell. It sends forth long, fleshy, thick, downy leaves, cut deeply on the sides, and dentated on the edges; the colour is of a sea-green, and they lie upon the ground, where they continue all winter. The stalk, which does not rise till the second year, is strong, solid, knotty, smooth, and divided into several branches, sending forth leaves from the knots that are smaller, and not so jagged as those below. The flowers grow on the top of the stalks and branches, and are as large as those of garden poppies, being each composed of four yellow petals, placed in the form of a rose, in the middle of which, there are a great number of stamina of the same colour. They are succeeded by fruit, or a sort of pods, a span in length, or longer, and are very slender and crooked like horns; they are rough to the touch, blunt at the ends, and contain a double row of seeds, separated by a partition, and as round as those of the common poppy, and very black. It grows wild on the sea-shore, and in sandy maritime places. If it be sown in gardens in autumn, it will come up in the spring, and will flower in *June* and *July*, and the pod will be ripe in *August*. This plant is accounted diuretic, and very good for those who make thick urine: in *Portugal* they give an infusion of half a handful of the leaves in a glass of white wine for the gravel and stone; but it has not been brought into use in *England*.

PAPAVER RHÆAS, the greater wild Poppy, or *Comrose*, has a single white root, as thick as one's little finger, furnished with a few fibres, and has a bitter taste. It sends forth several stalks, to the height of a cubit, or upwards, which are round, solid, hairy, and branched; the leaves are jagged like those of succory, hairy, of a brownish green, and dentated on the edges. The flowers grow on the top of the stalks and branches, are composed of four large, thin, deep, red leaves, which are ready to fall off with each blast of wind; these are succeeded by small heads of the size of hazel nuts, that are oblong, smooth, and much of the same shape with those of the garden poppy.

They are divided into several cells, containing blackish, or dark red seeds. This plant grows almost every where in the fields, especially among corn. It flowers in *May, June, and July*. The flowers are made use of in medicine, and are in some measure anodyne and narcotic. They are good in acrimonious catarrhs, roughnesses of the face, and in commotions of the fluids. They may be drank as tea, and are of very great service in all cases where a gentle opiate is useful; there is a syrup made with these flowers, kept in the shops, which will serve for the above purposes.

PAPAVR HORTENSE NIGRO SEMINE,
the lesser Garden-Poppy, has a root about the thickness of one's little finger, full of a bitterish milk, as well as the whole plant. It sends forth an upright stalk, to the height of two cubits, which is generally smooth, though sometimes a little hairy, and the leaves are oblong, broad, dentated, curled, and of a sea-green colour. The flowers grow on the top of the stalks and branches, and are large, in the shape of a rose, of a reddish colour, sometimes single, and sometimes double; as also sometimes fringed on the edge, and sometimes not. The calyx consists of two leaves, that generally fall off as soon as the flower is blown. It is succeeded by roundish heads of different sizes, crowned with a sort of cover, in the form of a star, and contains in their cavities or membranous cells seeds of a blackish colour. There is a great variety of these plants, as well in colour as shape, that are sown in gardens for the sake of their flowers; but they are not so much used in medicine as the white poppy. They may be all propagated by the seeds sown in autumn, and will flower in *May and June*, and sometimes during all the summer.

The heads of the stalks of these plants contain a milky juice, which may be collected in a considerable quantity, by slightly wounding them when almost ripe; this, exposed for a few days to the air, thickens into a clammy mass of the same quality as opium, but weaker. Poppy heads boiled in water communicate their virtues to it very freely; and, when the liquor is strongly pressed out, clarified with the whites of eggs, and

evaporated

evaporated to a due consistence, yields an extract that weighs about one sixth of the weight of the heads. Some count it more safe than opium, but it must be given in a double dose.

PARIETARIA, *Pellitory of the wall*, has a fibrous reddish root, with several stalks that rise to the height of two feet, which are round, reddish, brittle, and branched. The leaves are oblong, and are pointed, downy, of a brownish green colour, shining, rough, and apt to hang to the cloaths of passengers; they have long pedicles, and are placed alternately on the stalks. The flower has no petals, but has generally four stamina, that rise out of a flower-cup, divided into four parts, which is sometimes in the shape of a bell, and sometimes like that of a funnel; they surround a pistil that generally turns to an oblong seed, contained in a capsula that was in the cup of the flower. It grows upon old walls and buildings in great plenty, and flowers in *May*. It is looked upon as aperient, tempering and resolvent, whether taken inwardly or applied outwardly. The dose, in infusion, is from one handful to three, and of the juice from one ounce to three. It is accounted one of the five emollient herbs, and is made use of occasionally for that intention, particularly in decoctions, fomentations and clysters.

PASTINACA, *Parsnep*, or *the Garden Parsnep*, has a long, thick, fleshy root, of a yellowish colour, in the middle of which there is a nerve, that runs throughout its whole length. The stalk rises to the height of three or four feet, and is upright, firm, furrowed, hollow, and branched. The leaves are large, and composed of other leaves, that are villous, dented on the edges, winged, and are placed on a pretty large rib; they are of a brownish green, and placed by pairs along the rib, which is terminated by a single leaf. The flowers grow on the tops of the stalks and branches in large umbels, and each flower has four yellow petals, placed in the form of a rose; these are succeeded by large, oval, flatfish, slightly furrowed seeds, bordered by a small membranous leaf, resembling those of angelica. The root of this plant is of great

use as food, for which it is chiefly employed. It flowers in *July* and *August*, the second year, after it has been sown. The taste of parsneps is well known, and they are more nourishing than carrots, though some have a natural aversion to their use.

PASTINACA SYLVESTRIS, *wild Parsnep*, has a white single root, that has sometimes large fibres, and has the same taste and smell as the garden parsnep. The stalk is two or three cubits high, and is upright, stiff, furrowed, hairy, hollow within, branched, and has leaves alternately placed like the former; but they are smaller, of a deeper green, and are sometimes hairy, especially towards the root. The flowers grow in umbels, and are small, yellow, and composed of five petals each; these are succeeded by double seeds, as in the former. It grows in uncultivated places, in dry fields, and upon hills, and flowers in the summer. Some make use of it as an aliment, and pretend, when the seeds are sown in the garden, they will produce as good parsneps as the garden sort. Both the seeds and root have been commended as a remedy against agues; but they often fail.

PERIPOLCA, *Virginian filk*, or *climbing dog's bane*, of Montpellier, has a root almost as thick as one's finger, that is long, white, fibrous and creeping; as also full of milky juice, as well as the rest of the plant. The stalks rise to the height of two cubits, and are slender, round, branched, pliant, and creep upon any tree that stands near it. The leaves stand opposite to each other, are large, thick, whitish, pointed, and cut in the form of a cross, near the pedicle, and are full of a milky juice. The flowers proceed from the places where the leaves join to the stalk, consisting of a single petal that is white, and cut into five segments in the form of a star. The pistil is succeeded by a fruit, so like that of dog's bane, as not to be distinguished from it; and when it is opened, it discovers a downy substance, under which the seeds lie. It grows wild about Montpellier, but with us it is propagated in gardens, by laying down the branches at the spring of the year; it flowers in *June*, *July*

July and August; and the milky juice being inspissated over the fire, becomes blackish, and greatly resembles scamony, but is not so purging; and therefore requires a large dose to procure that effect.

PERSICARIA MITIS, *dead or spotted Arse Smart*, has a slender, oblique, woody, fibrous root, difficult to break, and sends forth stalks to the height of a foot, that are round, hollow, reddish, branched and knotted. The leaves are like those of the peach-tree, and sometimes marked with blackish spots. The flowers grow in spikes, and consist of single petals, cut into five segments, and are without a calyx; but there are five stamina that are purple and shining, though sometimes whitish; they are succeeded by oval, flattish, pointed, smooth, blackish seeds. It has not so acrid a taste as the following, and is a little tart. It grows in watery, marshy, places, as well as in moist ditches, almost every where, and flowers in *July and August*. It is looked upon as astringent, deterfive, and vulnerary, and its decoction is said to be good in fluxes of the belly, and for ulcers of the intestines.

PERSICARIA URENS, *biting Arse Smart*, has a small, single, woody, white, fibrous root, that sends forth several stalks to the height of a foot and a half, which are firm, round, smooth, knotty, branched, sometimes reddish, and sometimes of a greenish yellow. The leaves proceed from the knots of the stalk, which they embrace by their membranous appendages, and are of a pale green, and like those of the peach tree. The flowers grow in long spikes on the top of the stalk and branches, and consist of a single petal, cut into five segments; there is no calyx, but there are five stamina generally of a purple colour, which are succeeded by pretty large seeds, somewhat triangular, shining and blackish. It has an acrid biting taste, like pepper, and grows in watery marshy places on the sides of brooks and ditches; it flowers in *July and August*. It is said to be cleansing and vulnerary, and to be good in the dropsy, jaundice, and obstructions in the viscera. Its distilled water, given to two or three ounces, is by some accounted a specific against the gravel. All authors agree, that this herb,

applied to old ulcers, eats away proud flesh, and cleanses and dries them; being applied as a cataplasm to the bruises of horses, it resolves the coagulated blood; if the wounds and ulcers are washed with the juice, the flies will never come near them.

PERVINCA, *five* CLEMATIS DAPHNOIDES, *Periwinckle*, has a fibrous root, with slender, long, round, green, knotty, creeping, climbing stalks; the leaves are oblong, green, smooth, and placed by pairs, opposite to each other, and are of a bitter styptic taste. The flower-cup consists of a single leaf, divided into five long, narrow segments; and the flower of a single petal is cut into five segments, that expand into the form of a salver. The pistil is fixed in the lowest part of the flower, like a nail, and turns to a fruit composed of two husks or pods, which contain oblong, cylindrical, furrowed seeds. Some call it Ground Laurel, because its leaves resemble those of that tree. This plant is an ever-green, and is propagated by the branches that take root in the earth. It flowers in the spring, and continues to do the same for a long while. It is accounted vulnerary, and is found almost every where, in hedges, and among shrubs.

PERVINCA LATIFOLIA, *five* FLORE CÆRULEO, *greater Periwinckle*, with a blue flower, has a fibrous creeping root, with several thick, round, knotty, green creeping branches. The leaves are placed by pairs, facing each other, along the stalks, and are of a shining green, with a bitter acrimonious disagreeable taste. The flowers, like the former, are generally blue, though sometimes white and without smell; it differs from the former only in being larger in all its parts. It is said to be vulnerary, astringent, and febrifuge, and is given to abate all kinds of bleedings.

PETASITES, *Butter Bur*, has a thick, long root, brown without, and white within; the stalks are thick, hollow, and hairy, and rise to the height of half a foot; the leaves are small, narrow, and pointed; and the flowers grow at the end of the stalks in tufts, and
consist

consist of many florets, divided into several parts; they are contained in a cylindrical calyx, cloven almost down to the bottom, into many segments. There is a single embryo that becomes a seed, furnished with down. The flowers appear before the leaves, which are very broad, and have a hollow in the middle, and round that a hollow expansion in such a manner, that they resemble bonnets. It grows in moist places on the sides of rivers, brooks, lakes, and ponds, and flowers early in the spring. In some places, the leaves grow to the height of a man, and continue all the winter. Some authors have confounded this plant with the great burdock, because the leaves have some resemblance to each other. The root, which is the part made use of is aperient, resolvent, hysteric, and vulnerary, and brings up phlegm in asthmas and obstinate coughs.

PETROSELINUM, *Parsley*, has a single root as thick as one's finger, and often much thicker, that is furnished with a few fibres; it is whitish, long, and good to eat. The stalks sometimes grow to the height of three or four feet, and are round, furrowed, knotted, and branched. The leaves are composed of others that are cut into jags, are green, and have long pedicles. The flowers grow on the top in umbels, and are composed of five pale petals, disposed in the form of a rose; these are succeeded by seeds that are joined by pairs, and are slender, furrowed, grey, and roundish at the back. It is cultivated in gardens, and will endure all sorts of weather. It delights in a moist ground, for which reason it should be often watered. It sends forth a stalk the second year after it is sown, flowers in *June* and *July*, and the seed is ripe in *August*. It is aperient, and is said to open obstructions; but its chief use is only as a kitchen herb. The seed is one of the four hot seeds, is attenuating and diuretic, and is said to be good in the gravel and dropsy.

PETROSELINUM MACEDONICUM, *Macedonian Parsley*, has a long, thick, white, wrinkled, woody root, which sends forth a stalk to the height of a foot and a half, that is thick, hairy, and branched. The

leaves resemble those of garden parsley; but are more large, a little more cut, and dentated. The flowers grow on the top of the branches in umbels, are whitish, and composed of five petals in the form of a rose. They are succeeded by slender, hairy, oblong, aromatic seeds, of an acrid taste. It grows wild in *Macedonia*, and was greatly valued by the ancients; but is here cultivated in gardens. The seed only is in use, and has the same virtues as that of common parsley, but stronger, and is an ingredient of *Venice treacle*.

PHASEOLUS, the *Kidney bean plant*, has a slender, fibrous root, and sends forth a long, round, branched, climbing stalk. The leaves come out by threes, in the manner of trefoil, and are large, pointed at the end, fleshy, smooth, and almost like those of ivy, with long, green pedicles. The flowers are papilionaceous, and a pistil rises out of the flower-cup, which turns to a long pod full of seeds, generally shaped like a kidney. The use of kidney beans is well known, and therefore need not be mentioned here. They are opening, emollient, resolvent, and promote urine, and generally agree with most constitutions. The meal of the seed is sometimes mixed in emollient cataplasms.

PHILLYREA, *Mask Privet*, has a thick strong root that runs deep into the ground, and the stems rise to eight or ten feet high, and are covered with a white or ash coloured bark, a little wrinkled. It is an ever green shrub, with leaves like those of the privet, and a flower that consists of a single petal in the shape of a bell, cut into four parts at the top; the colour is a whitish green or herbaceous. The pistil that rises from the center of the calyx afterwards turns to a spherical fruit or berry, that is black when ripe, and contains one seed. They have been formerly in great request, for hedges and to cover walls; but they are most proper for wildernesses. It flowers in *May* and *June*, and the fruit is ripe in *September*. It is of little or no use in medicine.

RHYTOLLACA, *American night shade*, has a root a foot long, that sometimes grows to the thickness

of

of a man's thigh, which is white, and perennial. The stalk rises to the height of five or six feet, and is thick, round, strong, reddish, and divided into several branches. The leaves are placed irregularly, and are large, veinous, soft, and of a pale green, tho' sometimes reddish; the shape is like those of common night shade. The flowers grow in bunches, each of which consists of several petals, placed in a circular order, which are of a pale red colour. The pistil rises from the center, and the flower is succeeded by a soft fruit or berry, that is roundish, full of juice, and like a button flattened above and below; when it is ripe, it is of a brownish red colour, and contains several round black seeds, placed orbicularly. It is very common in our northern *American* plantations, and is cultivated in *England*, for the beauty of its flowers. It may be propagated by sowing the seeds in the spring, upon a bed of light rich earth; and, when the plants are come up, they should be moved into the borders of large gardens, allowing them room enough to grow, for they will become very large. The berries are full of a purple juice, which gives a fine tincture to paper; but it will not last long.

PILOSELLA, *common Mouse Ear*, has a short, slender root, furnished with fibres, that send out slender, hairy stalks, which creep upon the ground, where they take root again. The leaves are oblong and roundish at the end, like the ears of a mouse, from whence it has its name, and they are covered with hair; they are green above, but downy below, and have an astringent taste. The flowers are only a single floret, of a yellow colour, with a scaly single calyx, which is succeeded by slender, black, downy seeds, in the shape of a wedge. It grows in dry barren land, and on the sides of highways. It flowers in *May*, *June*, and *July*. It is very bitter and accounted astringent, vulnerary, and deterfive. The extract, given to two drams, is said to be very useful in internal ulcers; likewise, eight ounces of the infusion of this plant, in white wine, is boasted of as an infallible remedy against the ague, given an hour before the fit.

PIMPINELLA, *Burnet, or Pimpernel Parsley*, has a round, slender root, divided into several reddish branches, among which are sometimes found certain red grains, which they call wild cochineal, and which are useful in dying. The stalks are red, angular and branched; the leaves are oblong or roundish, dentated on the edges, and placed by pairs on the ribs. The flowers grow on the ends of the stalks, in round heads, and consist of a single petal, divided into four parts, in the form of a rose, and of a purple colour; in the middle there is a tuft of long stamina, the flowers are of two sorts, the one barren, and furnished with stamina, the other fruitful, that have a pistil. This is succeeded by a quadrangular fruit generally pointed at both ends, and of an ash colour when ripe, containing oblong, slender, reddish brown seeds, with an astringent and somewhat bitter taste. It grows wild in many parts of *England*, particularly on dry chalky land, and on hills and mountains. It is said to be detergent, vulnerary, and diuretic, and some pretend it stops hæmorrhages, as well internal as external, either given in decoction or powder. The dose, in infusion or decoction, is from half a handful to two handfuls, and of the juice, from an ounce to three ounces, or by Spoonfuls.

PINGUICULA, *Butter wort*, has a fibrous root, that sends forth six or seven leaves, and sometimes more; they lie upon the ground, are of a yellowish green, and somewhat thick and shining, as if butter had been rubbed over them; they are two inches long, about one broad, somewhat blunt at the extremities, and even on the edges. In the middle a pedicle arises as high as one's hand, at the top of which is a purple violet, or white flower, like that of a violet; but it consists of a single petal, divided into two lips, and sub-divided into several parts; but, at the bottom, it terminates in a spur. It is succeeded by a fruit or shell, whose lower part is enclosed in the calyx, which when open discovers a button, containing several small almost round seeds. It grows in meadows, and other moist and marshy places, and flowers in the spring. It is vulnerary, and heals green wounds very soon; and

and the juice makes an excellent liniment for chaps of the nipples.

PIPER INDICUM, *five* CAPSICUM, *Guinea* Pepper, has a short, slender root, furnished on each side with a great number of fibres, which send forth a stalk to the height of a foot and a half, and upwards, especially in hot countries; this is angular, hard, hairy, and branched; the leaves are long, pointed, and broader than those of arsefmart; they are somewhat thick and fleshy, of a greenish brown, and without hair. The flowers, which grow under the joints of the leaves, where they adhere to the branches, are rosaceous, and of a whitish colour, very much resembling those of common nightshade, but larger, and supported by a pretty long, fleshy, red pedicle. They are succeeded by a long capsula, as thick as one's thumb, strait, and formed of a fleshy, shining, polished skin, which is green at first, afterwards yellow, and then red; it is divided into two or three cells, that contain many flattish seeds of a whitish colour, inclining to yellow, and generally of the shape of kidneys. It grows naturally in the *Indies*, and particularly in *Guinea* and *Brazil*. It is easily propagated by seeds in hot countries; and there are several sorts of it; as the capsicum with long hanging pods; that with long pods which turn up at the end; the broad leaved capsicum, with long streaked pods, commonly called bonnet pepper; *African* capsicum, with rough hanging pods; *African* capsicum, with pyramidal rough pods, generally growing erect; capsicum with long hanging pods that are not hot; capsicum with red pods, in the shape of hearts, generally hanging downwards; capsicum with pyramidal, thick, red pods, generally growing upright; upright olive shaped capsicum; capsicum with small, red pods, growing upright, called *Barbary* pepper; capsicum with small, round, very hot pods, named bird pepper; *American* capsicum, with round shaped fruit, broad leaves; *American* capsicum, with oblong white pods, growing erect, and capsicum with large, rough, red pods, generally hanging downwards. There are two or three other sorts, but these are the principal, and they are
sown,

sown in many curious gardens, in hot beds. They are pretty hardy, and may be planted abroad about the middle of *June*. The inhabitants of the *West-Indies* make a great use of the bird pepper, which they dry, reduce to a powder, and mix with other ingredients. They send some of the pots to *England*, under the name of *Cavan* butter, and this is in great esteem by some. They likewise eat the fruits of some of these kind raw, but they will burn the throats of those that are not used to them. The last makes one of the finest and wholesomest pickles in the world, if they are gathered before the skins grow tough. It is at present of no use in physic.

PISUM, the *Pea Plant*, has a slender, fibrous root, that sends forth long, hallow, brittle stalks, of a sea-green colour, that would lie upon the ground if they were not supported by props. The leaves are oblong, of the same colour as the stalks, and some are so placed that the stalks seem to run through them, while others grow by pairs on the ribs, that are terminated by tendrils or claspers, which lay hold of every thing they meet with; two or three flowers proceed together from the places where the leaves join to the stalks, and are papilionaceous and white. The pistil is succeeded by a long pod, full of roundish seeds, which are very well known. There are several sorts of peas, as the great garden pea, with white flowers and fruit; the hotspur pea; the dwarf pea, the *French* dwarf pea; the pea with an esculent husk, the fickle pea, the common white pea, the green rouncival pea, the grey pea, the marble rouncival pea, the rose pea, or brown pea, the *Spanish* morotto pea, the marrowfat pea, the union pea, the *English* sea pea, and the pig pea. The *English* sea pea is found wild on the shores of *Sussex*, and several other counties in *England*; and in times of scarcity they have been a very great help to poor people. The propagating of peas is so well known, that the manner of it needs not to be taken notice of here. The use of peas is also very well known, they being common food in all parts of *England*; but they are windy, and do not very well agree with weak stomachs.

Green

Green peas are very good eaten raw, for those that have the sea scurvy.

PLANTAGO MAJOR, *great Plantain*, has a short root, as thick as one's finger, and is furnished with whitish fibres on the sides; it sends forth large shining leaves, seldom dentated on the edges, and have each eight nerves, that run throughout their whole length. The stalk, which rises from the middle of the leaves to about a foot in height, is round, hard to break, and sometimes reddish, as well as a little hairy. There grows on the top an oblong point, with small whitish flowers; each of these is a pipe, close shut at the bottom, open at the top, and cut into four parts, in which are several stamina. It is succeeded by a fruit, with a thick, oval, pointed shell, that opens crossways, and contains several small, oval, reddish seeds. This plant is very common, and grows almost every where. It flowers in *May* and *June*, and the fruit is ripe in *August*.

There is another sort of plantain, that has a thick root, which seems to be bit off at the end; the leaves are narrower than those of the former, and contain only five nerves; there are likewise a third that contains but three, and this is called the *Lesser Plantain*. They all have the same medicinal uses, and the leaves are bitter and astringent. It is accounted resolvent and febrifuge; for the juice being given from two to four ounces, in the beginning of intermitting fevers, often cures them. A ptisan, made with the leaves of plantain, is good in the bloody-flux, spitting of blood, and all other hemorrhages whatever. The decoction is an excellent gargle in ulcers of the mouth; and with lime-water it cures ulcers of the legs. Made into an ointment, with fresh butter, it is said to cure the piles.

POLYGONATUM, *Solomon's seal*, has a long root, as thick as one's finger, and full of large knots or tubercles, of a whitish colour, and furnished with many fibres. The stalks rise to the height of a foot and a half, and are round, smooth, and without branches. The leaves are placed alternately, and are large, oblong, full of nerves, and of a brownish, shining

shining green above, but of a sea-green or blueish colour below. The flowers grow in the places where the leaves join to the stalks, sometimes single, and sometimes double and treble; they are in the shape of a bell, cut at the top into six segments, but they have no calyx; the colour is white, except the edges, which are greenish. The embryo, which is seated on the center of the flower, becomes a berry, like those of ivy; it is a little soft, green, purple, or blackish, and generally contains three large seeds, like those of vetches. It is very common in all parts of *England*, and grows in shady places by the sides of hedges, and in woods and forests. There are several sorts of this plant, which may easily be propagated, by parting the roots in the spring, before they begin to shoot; they should be planted in fresh, light earth, that is not very rich, where they will thrive exceeding well. It flowers in *May* and *June*, and the berries are ripe in *August*; but the root is chiefly used in medicine. All authors look upon this plant as astringent and vulnerary, and it has been often used for the cure of ruptures; but it is now entirely neglected among us.

POLYPODIUM, *Polypody*, or *Oak Fern*, has a root six inches in length, and almost as thick as a man's little finger, that creeps along the surface of the ground; it is full of tubercles or warts, and is easily broken. It sends forth leaves, which are like those of male fern, but much less; they are deeply cut almost to the rib, into long narrow segments, which are covered on the back with a sort of reddish powder. This, examined through a microscope, appears to be spherical, membranous shells, which open, and let fall small yellow seeds, in the form of a kidney. It is a capillary plant, and consequently bears no flowers; it grows in forests, valleys, and among stones covered with moss, as well as on the trunks of old trees. The root only is used in medicine, and that is accounted best that is found upon oaks. It is green all the year, and in *April* it sends forth fresh leaves. The ancients accounted this root to be purgative; but it does not so much loosen the belly, or at least very weakly. Some affirm, that it opens obstructions of the viscera; but

but the best authors are not agreed in its virtues, tho' it has been much used in medicine.

POPULUS NIGRA, *the black Poplar tree*, has a root that spreads very deep in the earth, and grows to a tall tree, with leaves that are almost round, and cut on the edges. They are of a blackish colour, and always tremble, though there is no wind. Some bear no flowers or fruit, except catkins, which consist of many pointed small leaves; for the fruit grows on those trees that bear no catkins, and they consist of several small leaves, under which lies a bell, containing the embryo; this turns to a membranaceous spiked pod, that opens two ways, and is full of downy seeds. In the beginning of the spring it produces many buds, about the size of capers, which are oblong, pointed, of a greenish yellow, and full of a clammy juice, which sticks to the fingers of those that touch them. It grows in moist watery places, on the sides of brooks and rivers; the buds appear in *April*, and the catkins in *May* or *June*. The buds are only made use of in medicine, and a tincture may be extracted from them with spirits of wine, which, according to *Tournefort*, is excellent to stop inveterate fluxes of the belly, and to heal interaal ulcers. The dose is a dram morning and evening, in a spoonful of hot broth. They are also employed in making the unguentum populeum.

POPULUS ALBA, *the white Poplar tree*, has a root that spreads on the surface of the earth, and the trunk as high, and full of branches, with a smooth, whitish bark. The wood is white, but not so hard as that of the black poplar, and is more easily cloven. The leaves are broad, and deeply cut on the edges, they being not very unlike those of the vine, or the large maple, but they are more small, green, smooth, and without hair above, but underneath they are white, and downy, and have long pedicles. The catkins and fruit grow on different trees, and are like those of the former. It delights in moist places, and grows to a considerable height in a little time. It may be easily propagated by the shoots that grow on the foot of the tree, and may be planted in meadows, but

but not in the places where the spreading roots will damage the grass. It grows almost every where, and the wood is of greater use than that of the black. In *France* they make wooden shoes with it, and it serves every where for the heels of women's shoes. No part of it is now used in medicine.

PORRUM COMMUNE CAPITATUM, *the common Leek*, has an oblong, almost cylindrical, smooth, shining, white, bulbous root, consisting of several white coats, joined one to another, and furnished below with several fibres. The leaves proceed from the coats of the root, to the height of a foot, and are pretty broad, and placed alternately; they are flat or folded in the form of a gutter, and are of a pale greenish colour. Between these leaves there rises a stalk to a considerable height, and in some countries it is five feet high, and as thick as a man's finger. It is firm, solid, full of juice, and has at the top a bunch of flowers, each of which consists of six petals, composed in the shape of a bell, with as many large cylindrical stamens, terminating in three capillaments, of which the middlemost is furnished with a chive. The pistil is seated in the center of the flower, which becomes a roundish fruit, divided into three cells, containing roundish seeds. It has somewhat of the smell of an onion, and is a common kitchen plant, used almost every where. It flowers in *July*, and its seed is ripe in *August*. It is somewhat hard of digestion, and is a little windy; but these inconveniencies may be avoided by boiling them well. They are diuretic, and a dram of the seeds in particular may be given in a glass of white wine for that purpose. It is cultivated by sowing the seeds in the spring, along with those of onions; and when these last are drawn up in *July*, the leeks will have time to grow large afterwards.

PORTULACA, *Purslane*, has generally a single root, with a few fibres, which becomes woody in length of time; the stalks grow to the height of a foot, and are thick, roundish, reddish, tender, full of juice, smooth, and divided into several branches; the leaves, which are ranged alternately, are almost round,

round, thick, fleshy, shining, of a yellowish colour, and a clammy taste. The flowers grow at the places where the leaves join to the stalks, and are of a yellow or pale colour. They are each composed of five leaves, which expand in the form of a rose. The calyx consists of a single leaf, somewhat like a mitre, from which rises a pistil, which, together with the flower cup, turns to a fruit, or oblong capsula, that is like a small urn, and of an herbaceous colour. These capsula open transversely into two parts, and contain many small black seeds. It is propagated almost every where in gardens, by seeds, which must be sown in beds of light rich earth, during any of the summer months, and it will be fit for use six months after sowing. It is cooling, abates the acrimony of the humours, and is excellent in the scurvy. It is only proper for young persons, and those of a hot, bilious constitution. The leaves of purslane being chewed, abate the pains of the teeth, that arise from having been set on edge by eating green fruit.

PRIMULA VERIS, *Primrose*, has a thick, scaly, reddish, fibrous root, that sends forth large, rough, wrinkled leaves in the spring of the year, which lie on the ground, and are covered with so short a down, that it can hardly be perceived. From among these leaves there arise several stalks, to the height of a palm, that are round, a little hairy, naked, firm, and sustain the bunches of flowers at the top; they consist of a single petal, the lower part of which is tubulous, but the upper part expands in the form of a calver, and is cut into several segments. The pistil arises from the flower-cup, which is fistulous, and, when the flower is decayed, turns to an oblong fruit or husk, lying almost concealed in the flower-cup; it opens on the top, and discovers many roundish seeds, fastened to the placenta. It grows almost every where in the fields, in shady places, from whence they may be transplanted into the garden, and placed under hedges. The best time for this is about *Michaelmas*, and then the roots will produce flowers early in the spring. It has always been observed, that this plant has some-

what two sexes, and that the seeds of one will not grow in the soil of the other.

what of a soporiferous quality. The medicinal uses of this flower are not yet properly ascertained.

PRUNUS, *the Plumb tree*, has a flower that consists of five petals, placed in a circular order, and expanded in the form of a rose. The pistil arises from the flower-cup, which afterwards becomes an oval, globular fruit, with a soft fleshy pulp, surrounding an hard oblong stone, generally pointed. The pedicles, or foot stalks, are long and slender, and there is only a single plumb on each. There are several sorts of plumb trees, as the *Jean-baptiste*, or white Primordian, which bears a small, longish, white plumb, of a clear yellow colour, covered over with a white flue, that easily wipes off. The juice is sweet, and it ripens in the middle of July.

The *early black Damask*, commonly called the *Morocco PLUMB*, is pretty large, of a round shape, and furrowed in the middle like a peach; the outside is of a dark black, covered with a light violet bloom; the flesh is yellow, and it parts readily from the stone. It ripens towards the end of July, and is in good esteem.

The *little black damask PLUMB* is small and black, with a violet bloom, and the juice has a rich sweetish taste; the flesh parts readily from the stone; it is a good bearer, and is ripe towards the latter end of July.

The *great damask violet PLUMB of Tours* is pretty large, inclining to an oval shape, and the outside is of a dark blue, covered with a violet bloom; the juice is rich and sweet, the flesh yellow, and parts readily from the stone; it ripens towards the latter end of July.

The *Orleans PLUMB* is of a reddish black colour, and is a fruit so well known to almost every person, that it needs not be described; it is a very plentiful bearer, and is planted by those who supply the markets with fruit, tho' it is but an indifferent plumb.

The *Fotheringham PLUMB* is of a blackish red, is somewhat long, and deeply furrowed in the middle; it has a firm flesh, that readily parts from the stone; the juice is very rich, and it ripens towards the latter end of July.

The *Perdrigon PLUMB* is of a middle size, and an oval shape, with a very dark outside, covered over with a violet

a violet bloom. The flesh is firm, and full of an excellent rich juice; it is in great esteem, and is ripe in the beginning of *August*.

The *violet Perdrigon* PLUMB is a large fruit, and rather round than long; it is of a blueish colour on the outside, but the flesh is yellowish, pretty firm, and adheres closely to the stone; the juice is extremely rich, and it ripens in the beginning of *August*.

The *white Perdrigon* PLUMB is of a middle size, and an oblong shape, with a yellowish outside, covered with a white bloom. The flesh is firm and well-tasted, and it is a very good fruit, either to eat raw, or make into a sweat-meat; for it has a pleasant sweetness, mixed with an acidity.

The *red imperial* PLUMB has a large fruit, of an oval shape, and of a deep red colour, covered with a fine bloom. The flesh is very dry, but it makes excellent sweat-meats, and is ripe in the beginning of *August*.

The *white imperial Bonum magnum*, or *white Holland*, or *Mogul* PLUMB, is a large fruit, of an oval shape, and a yellowish colour, powdered over with a white bloom. The flesh is firm, and adheres close to the stone; the taste is acid or sour, which renders it unfit to be eaten raw; but it does very well baked, or to make sweet-meats thereof. It is ripe in the beginning of *September*.

The *Cheston* PLUMB is of a middle size, and of an oval shape, with a dark blue outside, and a violet bloom. The juice is rich, and it is ripe in the beginning of *August*.

The *Apricot* PLUMB is a large round fruit, of a yellow colour, powdered over with a white bloom; the flesh is dry, the taste sweet, and it parts readily from the stone. It ripens in the beginning of *August*.

The *Maitre Claud*, though it has a *French* name, is not so called in *France*; it is of a middle size, rather long than round, and the colour is finely variegated with red and yellow; the flesh is firm, has a delicate flavour, and parts readily from the stone; it is ripe in the beginning of *August*.

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The *red diaper* PLUMB is a large round fruit, of a reddish colour, powdered over with a violet blue; the flesh has a very high flavour, and adheres closely to the stone; it is ripe about the middle of *August*.

St. Catherine's PLUMB is large and oval, but somewhat flat, and the outside is of an amber colour, powdered over with a whitish bloom; but the flesh is of a bright yellow, and is dry, firm, and adheres closely to the stone. It has a very agreeable sweet taste, and makes an excellent sweet-meat; it is ripe in the beginning of *September*.

The *royal* PLUMB is a large fruit, of an oval shape, inclining to a point next the stalk; the colour is of a light red, powdered over with a whitish bloom, and the flesh, which has a fine sweet taste, adheres to the stone; it is ripe about the beginning of *September*.

The *Brignole* PLUMB is of a large oval shape, and of a yellowish colour, mixed with red; the flesh is of a bright yellow, and, though it is dry, has an excellent rich flavour. It ripens towards the latter end of *August*, and is thought to be the best plumb for sweet-meats yet known.

The *black Bullace* grows wild in the hedges all over *England*, and is seldom or never cultivated in gardens.

The *white Bullace* grows wild as the former, and is very rarely planted in gardens.

The *Black-thorn*, or *Sloe-tree*, is very common almost every where, and is chiefly used for planting hedges, like the white thorn, and its being of a quick growth renders it very proper for that purpose. All sorts of plumbs are propagated by budding or grafting on the stocks of any sort that shoot freely; however, budding is much preferable to grafting.

PLUMBS are in great esteem every where, and may be planted to grow in various manners, as in standards, espaliers, or against walls. They require a soil neither too dry nor too wet, and those that are planted against walls should be placed to an east or south-east aspect, which are better than a direct south. Plumbs in general are moistening, laxative, and emollient,

lient, except the bullaces and sloes, which are astringent. They are cooling, quench thirst, and create an appetite, and therefore they agree best with hot constitutions; but they do not at all sit easy with those that have weak stomachs. In those years that plumbs are very plenty, and consequently much eaten by all sorts of people, fluxes of the belly generally abound, which often turn to bloody fluxes; hence it appears, that they ought always to be eaten very moderately, and then they should be quite ripe and sound.

PULEGIUM, *Penny-royal*, has a creeping, fibrous root, with square hairy stalks, some of which are upright, and others creep upon the ground. The leaves are like those of marjoram, but softer to the touch, and blacker; the smell is agreeable, but strong, and the taste is hot. The flowers proceed from the places where the leaves join to the stalks, and are disposed in rings round them; they are of a blueish or purple colour, though sometimes of a pale red; they are labiated, and the upper lip is cut into two segments; these are succeeded by small seeds. It flowers in *July* and *August*, at which time it ought to be gathered for use. This plant is aperient, hysteric, and good for disorders of the stomach and breast. It is proper for inveterate coughs, and rheums, and some recommend it to cure whooping-coughs. It may be taken in the manner of tea.

PULMONARIA, *Lungwort*, or *Sage of Jerusalem*, has a white fibrous root, and angular, hairy stalks, which rise to a foot in height, and are of a purplish colour, resembling those of bugloss. Some of the leaves proceed from the root, and lie upon the ground, while others embrace the stalks without pedicles; they are all oblong, broad, terminate in a point, have a nerve that runs through the whole length, are covered with a soft down, and generally marbled with whitish spots. The flowers grow in bunches, and each consists of tubes, that terminate in the shape of basins on the upper part; they are cut into five segments, and are of a purple or violet colour, with a calyx that is a dentated tube. They are succeeded by four roundish seeds, contained in the flower-cup like those of bugloss. It grows in

in woods, groves, and in mountainous and shady places. It is also cultivated in gardens, and flowers in *March* and *April*.

PULMONARIA ANGUSTIFOLIA, *Lungwort*, or *narrow-leav'd Sage of Bethlehem*, has a root like the former, which sends forth angular hairy stalks, to the height of a foot, and the leaves are oblong, narrow, and hairy, like those of wild bugloss, but softer, and not so rough; they have no pedicles, and they embrace their stalk by the middle. The flowers grow on the top of the stalks, and are like the former, only they are of a fine purple colour, mixed with blue. It grows almost every where, in woods and shady mountainous places.

PULMONARIA GALLORUM, *French Lungwort*, has a long, thick, jointed, reddish, fibrous root, full of a bitter milky juice, and the stalks rise to the height of a foot and a half; these are slender, hairy, and divided into several branches. The leaves proceed from the root, lie on the ground, and are sinuated towards the pedicle, they are greenish and hairy above, downy and whitish below; but generally marbled with long blackish spots. The flowers grow on the tops of the branches, and consist of yellow semi-florets, placed in a scaly cup; they are succeeded by oblong, small, tufted seeds, of a blackish colour. It generally grows on old walls, and in uncultivated places; it flowers in *June* and *July*, and sometimes later. They have all three the same virtues, and are accounted good in diseases of the lungs.

PULSATILLA, *Pasquet-flower*, has a long, thickish, single root, which is divided into several heads, that are hairy on the upper part, and black. The leaves proceed from the root, and are jagged and hairy; they are placed on long, reddish, very hairy ribs, that lie near the ground. From between the leaves there proceeds a round hollow stalk, to the height of a foot, covered with a thick soft down, and is without leaves, except one a little below the top. The flower consists of six oblong, pointed petals, disposed in the form of a rose, of a purple colour, hairy without, and smooth within. The pistil is placed in the middle, surrounded with

with yellow stamina or chives; this turns to a fruit, with a round head, that consists of several seeds, that terminate in a tuft like a feather. It grows in stony, dry, mountainous places, flowers near *Easter*, and is called *Palque* by the *French*, from whence it has its name. It is cultivated in gardens, for the sake of the flower. It is said to be a vulnerary plant, and the powder of the dried leaves and flowers, snuffed up the nose, provoke sneezing; but it leaves a burning heat behind it, that reaches as far as the brain; for this reason it is accounted good in sleepy diseases.

PYROLA, *Winter-green*, has a flexible, slender, fibrous, creeping, whitish root, which sends forth five or six fibrous leaves, like those of the pear tree; they are fleshy, thick, of a deep brownish green, and are smooth, have long pedicles lying on the ground, and continue green all the winter. The stalk rises to the height of a foot among the leaves, and is angular, single, and sometimes furnished with small pointed leaves; the flowers grow on the top, and are beautiful, scented, and are composed of five petals, placed in the form of a rose; they are white, and have ten shortish stamina, with a crooked pistil in the middle, like the trunk of an elephant; this turns to an angular fruit or button, consisting of five furrowed cells, containing reddish seeds, that are exceeding small. It grows wild in the north of *England*, on mossy moors, hills, and heaths; for which reason it is difficult to cultivate them in the southern parts; it flowers in *June* and *July*, and is looked upon to be an astringent vulnerary plant, and proper to stop internal bleedings; it may be taken in the manner of tea.

PYRUS, the *Pear tree*, has flowers that consist of several leaves, placed in a circle, which expand in the form of a rose; the flower-cup becomes a fleshy fruit, universally known, that has a hollow like a navel on the upper part; the cells, in which the seeds are lodged, are separated by soft membranes. The tree is so well known, that it needs no description, and therefore it will be sufficient to describe the several sorts of fruit.

The *little musk* PEAR, commonly called the *supreme*, is generally produced in large clusters, and is rather round than long, with short stalks; the skin is yellow when ripe, and the juice is somewhat musty; it is an excellent pear, if gathered before it is too ripe. It ripens towards the middle of July, and will continue good but a few days.

The *Ohio* PEAR, commonly called the *little Bastard musk pear*, is smaller than the former, but much of the same shape. The skin, when ripe, has a few streaks of red on the side next the sun, but it seldom hangs in clusters.

The *hasting* PEAR, commonly called the *green Chissel*, is larger than either of the former, and is longer next the stalk. The skin is thin, and of a whitish green when ripe; the flesh melts in the mouth, and, if not too ripe, has a sweetish taste; it is fit to gather towards the end of July.

The *red* MUSCADELEE is a large early pear, of great beauty, and the skin is of a fine yellow, beautifully striped; the flesh has a rich taste, if gathered before it be too ripe; but is it apt to be mealy. The tree generally produces two crops in a year, the first of which is commonly ripe towards the end of July, and the second in September, but is seldom well tasted.

The *little* MUSCAT is a small pear, rather round than long, and the skin is very thin, and of a yellowish colour when ripe. The flesh melts in the mouth, and has a rich musky flavour; but will not keep long when ripe, which is towards the latter end of July.

The JARGONELLE is a very long pear, in the shape of a pyramid, with a long pedicle or stalk; the skin is pretty thick, and of a rusty colour towards the sun; but the other side is of a russet green; the flesh has a rich musky flavour, and it ripens towards the end of July. This is one of the best early summer pears.

The *Windfor* PEAR is of an oblong shape, and terminates almost in a point next the stalk; the skin is smooth, and when ripe, of a yellowish green, with a very

very soft flesh; but if it hangs two or three days after it is ripe, it grows mealy.

The *JARGONELLE*, now commonly called *Cuisse madame*, is somewhat like the *Windsor Pear*, but is longer towards the crown, and smaller next the stalk; the skin is smooth, and of a pale green, with a flesh that is apt to be mealy.

The *orange musk PEAR* is of a middle size, of a short roundish form, and a yellowish skin, spotted with black. The flesh is musky, but is apt to be a little dry and choaky; it is ripe in the beginning of *August*.

The *little blanket PEAR* is much less than the former, and more pinched in near the stalk, which is shorter, but slenderer than that of the former. The skin is soft, and of a pale green, with a tender flesh, full of a rich musky juice; it ripens in the beginning of *August*.

The *long stalked blanket PEAR* is shaped somewhat like the former, but the eye is larger, and more hollow at the crown; it is somewhat plumper towards the stalk, and a little crooked, with a very smooth white skin; the flesh is full of a rich sweetish juice, and it is ripe about the middle of *August*.

The *skinless PEAR*, or *early Russet*, is middle-sized, long, and of a reddish colour, with an extremely thin skin; the flesh melts in the mouth, and is full of a rich, sweet juice; it ripens in the beginning of *August*.

The *musk rovine PEAR*, the *queen's PEAR*, or the *amber PEAR*, is small and round, and of a yellowish colour when ripe; the flesh has a rich musky flavour, and it ripens in the beginning of *August*.

The *musk drone PEAR* is middle sized and round, and the skin is of a yellowish colour when ripe. The flesh melts in the mouth, and is full of a musky juice; but, if it hangs too long on the tree, it grows mealy; it ripens in the beginning of *August*.

The *red orange PEAR* is middle sized and round, and of a greenish colour, except on the side next the sun, which is purple when ripe. The flesh melts in the mouth, and the juice is sweet, with a very hollow

eye, and a short stalk; it ripens about the middle of *August*.

The *great onion PEAR*, or the *Summer Arch-duke*, is of a middle size and round, and of a brownish purple next the sun; the flesh melts in the mouth, and is tolerably good; it ripens in the beginning of *August*.

The *August MUSCAT*, or the *royal PEAR*, is in shape much like a Bergamot, and the stalk is long, strait, and a little spotted. The skin is smooth, and of a whitish yellow colour, with a rich, sweet, perfumed juice; it is one of the best summer pears yet known, and grows ripe in *August*.

The *rose PEAR* is short and round, and of a yellowish green colour, but a little inclining to red next the sun. The stalk is very long and slender, and the juice is musky; it grows ripe in *August*.

The *prince's PEAR* is small, roundish, and of a bright red colour next the sun, but on the other side it is yellowish; the flesh has a very high flavour, and grows ripe in the middle of *September*.

The *great mouth-water PEAR* is large and round, with a smooth green skin, and a short thick stalk; the flesh melts in the mouth, and is full of juice, if gathered before it is too ripe, which is about the middle of *August*.

The *summer Bergamot* is a pretty large, round, flat pear, of a greenish yellow colour, and hollowed a little at both ends, like an apple; the flesh melts in the mouth, and it is ripe towards the latter end of *August*.

The *autumnal Bergamot* is smaller than the former, but of the same shape, with a yellowish green skin, reddish on the side next the sun; the flesh melts in the mouth, and it grows ripe towards the latter end of *September*.

The *Swiss Bergamot* is somewhat rounder than the former, with a tough greenish skin striped with red; the flesh is full of juice, melts in the mouth, and it is ripe in the beginning of *October*.

The *red butter PEAR* is sometimes of other colours, as green or grey, whence some have supposed them to be different fruits. It is large and long, and generally

pally brown, with a melting flesh, full of rich sweet juice; it ripens in the beginning of *October*.

The *long green PEAR* is long, and very green when ripe, with a melting juicy flesh. It grows ripe in the middle of *October*, and in some years will keep till *December*.

The *white and grey Messieurs Jean* is one of the best autumnal pears, when grafted on a free stock. It is a large roundish fruit, with a tough skin, that is generally brown; it is full of a rich sweet juice, and ripens about the beginning of *October*.

The *flowered Muscat* is an excellent pear, of a middle size, and round, with a dark red skin; the flesh is very tender, and of a delicate flavour; it ripens towards the end of *October*.

The *vine PEAR* is round, and of a middle size, with a dark red skin; the flesh is full of a clammy juice, and it grows ripe towards the end of *October*; but should be gathered before, otherwise it will soon rot.

The *Roussilne PEAR* has a smooth skin, of a deep red colour next the sun, with grey spots, but the other side is of a greenish-yellow; the flesh is tender and delicate, and the juice sweet; it is ripe towards the end of *October*, but must not be kept long.

The *Marquise PEAR* is like the *Blanket*, when planted in a dry soil; but, when it is rich and moist, it grows larger. It is flat at the top, with a small hollow eye, and a skin of a greenish yellow, inclining to red on the side next the sun. If it is yellow when ripe, the flesh is tender and delicate, and full of a sweet juice. It grows ripe at the beginning of *November*.

The *crassane, or flat butter PEAR*, is of a middle size, and hollowed at the crown like an apple. The stalk is very long and crooked, and the skin is rough, and of a greenish colour when ripe, or rather russet. The flesh is tender and buttery, with a rich sweet juice. It is the very best pear of the season, and is fit to eat about the middle of *November*.

The *Lansac, or Dauphine PEAR*, is about the size of a *Bergamot*, of a roundish shape, and flat towards

the head; but it is a little longer towards the stalk; the skin is smooth, of a yellowish-green, with a yellow, tender, sweet flesh; the eye is very large, and the stalk long and straight; it grows ripe about the middle of *November*.

The *Martin sec* is like the rufflet in shape and colour. The shape is oblong, and the skin is of a deep rufflet on one side, but on the other inclining to red. The flesh is fine and sweet, and it is fit to eat about the latter end of *November*.

The little lard PEAR, or the rufflet of *Anjou*, is of a bright green, with a few spots, and a large hollow eye. The flesh is extremely fine, with a sweet juice; it is fit to eat in *December*, and is one of the best fruits in that season.

The *Louise bonne* has a short fleshy stalk, a small eye and flower, and a very smooth skin; the colour is green, inclining to white, and the flesh is extremely tender, and full of a sweet juice. It is fit to eat in *December*.

The *Eschafferie*, or the winter long green PEAR, is shaped like a citron, with a smooth green skin, that becomes yellowish when ripe. The eye is small, and the flesh melting and buttery, with a sweet juice. It is fit to eat in the beginning of *December*.

Parkinson's Warden, or the black Pear of *Worcester*, commonly weighs a pound or upwards, and has a rough, dark, red skin next the sun. It is only fit for baking or stewing, and is in season from *November* to *Christmas*.

The small winter butter PEAR has a small oblong shape, and a yellow colour, spotted with red. The flesh has a very rich juice, and it is fit to eat in *December* and *January*.

The *Ronville* PEAR is about the size and shape of a large rufflet, and the middle is swelled more on one side than the other; the skin is soft and smooth, and of a lively red colour next the sun, but yellow on the other; the flesh is full of a very sweet juice, that is a little perfumed.

The winter citron PEAR, or the *Musk-orange*, is a pretty large pear, and is in shape and colour very like an orange; the flesh is hard and dry, and apt to be stony,

stony, but it bakes very well, and is in season from *December to March*.

The *winter ruffler* PEAR is of a greenish yellow, inclining to brown, with a buttery melting flesh, which is generally very full of a very sweet juice; but it must always be pared, because the skin has a bad taste. It is fit to eat in *January and February*.

The *Bergamot Bug* is a large pear, and almost round, but it is a little longish towards the stalk; the eye is flat, and the skin green, and there are many rough protuberances thereon; but as it ripens it becomes yellowish, and in a good season the flesh is sweet; it is good to eat from *February to April*.

The *Dutch Bergamot* is large and round, and of the shape of the common bergamot; the colour is greenish, the flesh pretty tender, and the juice of a high flavour. It continues good till *April*.

The *Naples* PEAR is pretty large, long, and greenish, with a sweet, and somewhat veinous juice; it is called in *England* the *Easter St. Germain*, and will keep till *April*.

There are many other sorts of pears that are still to be seen in some old gardens, but are of no great esteem; those that plant pears for use, ought always to choose them of the best sorts, because the trouble and expence is the same. They are propagated by budding or grafting them upon stocks of their own kind, which are commonly called free stocks; but quince stocks are greatly used in the nurseries, for all sorts of pears that are designed for dwarfs or walls.

As to wild pears, they are always so astringent and rough, that they are not fit to be eaten, though they may serve well enough to make perry. In general, pears are windy, and improper for weak stomachs; some think they are enemies to the nervous parts; however, those are best that are quite ripe, and have a sweet juice, and then they are seldom noxious, unless eaten to excess.

QUERCUS VULGARIS, the common oak tree, is well known in all parts of *Europe*, as also its wood, for its long duration, and various uses. The flowers are long catkins, which consist of a great number of small slender threads;

threads; but the embryos are produced at some distance from these, and afterwards become acorns, with hard scaly cups. It grows in woods, forests, and high mountainous places; the leaves appear before the flower, and the catkins may be seen in *April* and *May*, but the acorns are not ripe till *August*. It is commonly said, that an oak tree is an hundred years coming to its full growth, an hundred years in perfection, and an hundred years in decaying. Some affirm the wood will continue good six hundred years in the open air, and five hundred underground. Oak bark is of very great use for tanning of leather, and upon these accounts the oak is called by some the king of trees. The *English* oak is best for building of ships; but now there are great numbers constructed in *New-England*, of the oak wood that grows in those parts, though they are not so lasting.

The leaves of the oak are styptick, and a little bitterish, and all parts of it are astringent. They have often been prescribed for all sorts of hæmorrhages and fluxes of the belly, and some pretend that a decoction of the bark has cured a most terrible bloody-flux. In times of scarcity, a great many poor people have made bread of the acorns, and the poets tell us they were the food of the golden age; however, they are heavy, windy, and hard of digestion, and there ore mankind in those early ages must doubtless have a better digestion than us. They are now given to hogs, for which they are excellent nourishment, and render the flesh fat, firm, and sweet; for which reason that bacon is in most esteem, that comes from places where there are plenty of acorns.

There are a great number of trees that go under the name of oaks, in divers parts of the world, but there are no where so many different kinds, as in *America*; the wood however is not nigh so valuable as the *English* oak, which has been hinted at above.

QUINQUE FOLIUM, *Cinquefoil*, has a long fibrous root, blackish without, and reddish within, which sends forth several stalks to the height of a foot and a half, which are round, flexible, hairy, reddish, and knotted; from these knots the leaves and roots pro-

proceed, and by their means this plant multiplies greatly. The leaves are oblong, roundish at the ends, nervous, hairy, dentated on the edges, of a dark green, and placed like an open hand, to the number of five upon the same pedicle, which is three inches and upwards in length. The flowers grow single on the top of the stalks, and consist of five yellow petals, in the form of a rose, and are somewhat in the shape of a heart; there are five stamina, with their apices in the form of a half-moon, and the pistil becomes a round fruit, composed of many pointed seeds, placed in the form of a head, and contained in the cup of the flower. It grows in fields, and in sandy stony places, as well as in meadows on the sides of waters; it flowers in *May* and *June*, and the root is chiefly in use. It is accounted balsamic, vulnerary, and astringent, and has been given in all sorts of hæmorrhages, as well as in all kinds of fluxes of the belly; some affirm it succeeds better than ipecacuanha; for which purpose an ounce of the root has been boiled in three pints of water to two; this decoction is also recommended in spitting of blood. It is confidently said, that a dram of this root, given in a glass of water, before a fit of an ague, will certainly cure it.

RANUNCULUS BULBOSUS, *Bulbous Crow-foot*, has a round bulbous root, with several upright stalks, that sometimes rise to the height of a foot, which are hairy, and have leaves that are cut into several slender jags, and on the top there are flowers of a fine yellow shining colour; they are generally single, and consist of five roundish petals, disposed in the form of a rose, the leaves of the calyx being bent back towards the pedicle. The fruit that succeeds the flower contains many roundish seeds, placed together in the form of a head. It flowers in *May*, and is to be met with almost every where in pasture grounds and meadows. When it is transplanted into gardens, the flower becomes double. The root of crow-foot is extremely acrid and caustic, and some authors recommend it to raise blisters; but this practice is dangerous, because it may cause a gangrene. There are quacks that apply it to the part afflicted with the gout, and on corns, to take them
 lost M 5 away

away; but we have much safer remedies. In some places it is common for beggars to make sores with this root, to raise compassion. The bruised leaves were once applied to the head of a patient, who had kept his bed for three years, on account of a violent headache, and they raised a blister, which ran freely, and he was soon cured.

RANUNCULUS NEMOROSUS, *Wood Anemone*, has a long creeping root, purplish or brown without, and yellowish within, when young. The stalk is small, slender, reddish, and rises to the height of a palm and a half, on the top of which there are three leaves, or reddish pedicles, each of which are cut down to the pedicle into three jags, and on the top there is a single flower without a calyx, sometimes white, and sometimes purplish or flesh-coloured; it consists of six oblong leaves, in the middle of which there are several yellowish stamina. These are succeeded by naked, oblong, hairy seeds, collected into a head. It flowers towards the beginning of *March*, to the end of *April*. Some recommend a cataplasm of the leaves and flowers for scald heads, and affirm it will cure them in a few days, if it be renewed twice a day; but others think it unsafe, from the bad effects they have seen from such applications.

RANUNCULUS PRATENSIS REPENS, *Crow-foot*, has a small creeping root, composed of whitish fibres, and many slender, round, hairy, hollow, creeping stalks, that lie upon the ground. The leaves are cut into three segments, somewhat like parsley, and are dentated on the edges, and hairy on both sides; they are of a blackish green, and generally marked with fine spots on the upper part. The flowers are of a shining yellow, and composed of five petals, disposed in the form of a rose, with a great number of stamina in the middle, and a flower-cup, consisting of five leaves, that falls off with the flower, which are succeeded by black seeds, placed together in the form of a head, and full of small points or prickles. It flowers in *May*, and grows almost everywhere in meadows and shady places. This may be taken inwardly without danger, and the cattle that

seed

seed on it yield a great deal of milk. Some use it in a fomentation against the piles. There are other species of the crow-foot, which had best be avoided.

RAPA, the *Turnep plant*, has a tuberosc, fleshy, bellied, round, thick root, that grows sometimes to the size of a child's head, and is universally known. The leaves are oblong, large, lie upon the ground, and are cut deeply into jags. They are rough to the touch, are of a greenish brown colour, and of the taste of a pot herb. The stalk rises from among the leaves, to the height of two feet, and sometimes to that of a man. The leaves embrace the stalk with their broad base, and terminate in a point. The flowers grow on the top of the stalk, are yellow, and consist of four leaves, disposed in the form of a cross, with a calyx fixed on a long slender pedicle. The pistil is succeeded by a pod, divided into two cells, by a partition, which contain two rows of roundish, reddish seeds. It flowers in the spring and summer.

RAPA OBLONGA, *five FOEMINA*, oblong, or *female Turnep*, differs from the former in having an oblong root that is not so thick. Besides these, there are the garden turnep, with a green root above ground; the ground garden turnep with a purple root; the round garden turnep with a rusty black root, and the round garden turnep with a yellow root both within and without; they all delight in a light sandy soil, for in a rich soil they will grow rank and sticky. The common season for sowing them is from the middle of June to the latter end of August, and in some places they sow them much later.

The use of turneps, as an aliment, is well known, and they are accounted an emollient, and proper to abate the acrimony of the humours; but they are windy, cause obstructions, and do not digest very easily. They are accounted a great pectoral, and many have been said to be cured of an asthma by their juice, that is, by taking a large spoonful in a morning fasting, for forty days together.

RAPHANUS MINOR, the *garden Radish*, has a long fleshy root, red or purple without, and white within.

within. The leaves are large, rough, green, deeply cut, and much like those of turneps. A stalk arises from among these, to the height of a foot and a half, or two feet, that is round, branched, and is adorned with flowers, consisting of four petals, in the form of a cross; the pistil arises from the flower-cup, which turns into a pod of the shape of a horn, that is spongy within, and contains two rows of roundish seeds that are separated by a thin membrane. It is cultivated in gardens, and the root is chiefly in use in the spring, which is tender, full of juice, and eaten as food. It agrees very well with most constitutions, provided they have good stomachs, for it is apt to rise therein. The juice is good in the gravel, if four ounces be taken of it for four days, in a morning fasting.

RAPHANUS RUSTICANUS, *Horse Radish*, has a long, thick, creeping, white root, that sends forth large long pointed leaves, of a fine green colour, somewhat like monk's rhubarb. From among these there arises a stalk, to the height of a foot and a half, which is upright, hollow, furrowed, and furnished with leaves, a palm in length, and an inch in breadth, and cut deeply on both sides. On the top there are small flowers, composed of four white petals, in the form of a cross, which are succeeded by small roundish pods, divided into two cells, that contain smooth, roundish, reddish seeds. It flowers in the spring, and grows wild on the sides of brooks and rivers, but is cultivated in gardens. It is used as mustard, to promote the digestion of aliments, and to create an appetite. The distilled water is given to four ounces against the scurvy and gravel, and to cleanse the blood. The expressed juice of the roots and seeds mixed with honey, and taken in a morning fasting, for some time, in whey, cleanses the stomach, kidneys, and lungs; it cures coughs, and inveterate hoarsenesses, provided they are not dry, or attended with spitting of blood. It is said to be excellent against the scurvy, dropy, and rheumatism, if continued for some time. The dose of the root in powder, is from one scruple to two; of the fresh root in decoction, from half an ounce to an ounce; and of the juice a spoonful.

is hard to say what a scruple of the root will do, since it is often eaten at meals in much larger quantities, therefore this seems to be a trifling dose.

RESEDA VULGARIS, *common bastard Rocket*, has a long, slender, woody, white root, which sends forth several stalks, to the height of a foot and a half, that are furrowed, hollow, hairy, branched, weak, crooked, and furnished with leaves, placed alternately; these are deeply cut, are curled, and of a dark green colour, with the taste of a pot-herb. The flowers are in loose spikes, and are each composed of yellow irregular petals, in the middle of which there are several small stamina, with yellow apices, and a pistil that turns to a four-cornered fruit, an inch in length, and like cylindric urns, full of small, roundish, black seeds. It flowers in *June, July, and August*, and is common in the fields. There are several kinds of this plant, that are propagated in the gardens of curious botanists. It is said to be emollient and resolvent, and is applied externally by some, to disperse inflammatory swellings, as well as to ease the pain.

RHAMNUS CATHARTICUS, *purging Buckthorn*, is a shrub with a long, hard, woody root, and it sometimes grows to the height of a tree, with a bark, like that of the cherry tree, and a yellowish wood; the branches are armed with thorns, like those of the wild pear tree. The leaves are roundish, of a blackish green, slightly dentated on the edges, and pretty much like those of the plumb tree. The flowers are small, of a greenish or yellowish colour, grow in bunches along the branches, and consist of single petals, in the shape of a funnel, divided at the top into four parts, and have as many stamina. These are succeeded by soft berries, green at first, and black when they are ripe; they are as large as juniper berries, are shining, and full of a greenish-black juice, with four seeds, roundish on the back. This shrub is common in hedges, and flowers in *May*, and the berries are ripe towards *October*. When these berries are gathered in harvest time, and steeped in alum-water, they will yield a yellow or saffron-coloured juice; if they are gathered in autumn, when they are ripe, and
kept

kept in a glass vessel, they will yield a good green; but if they are left on the tree till towards St. Martin's day, they will yield a scarlet, that is very useful to dye leather, and to colour cards with red. It is well known that the berries are a purge, which are said to be good in the dropsy, palsy, rheumatism, and gout. A dram, or a dram and a half, of the ripe berries, dried and powdered, is a dose. They generally occasion gripes, sickness, a dryness of the mouth and throat, and thirst. About twenty of the fresh berries is a dose in substance, and twice or thrice this number in decoction, or an ounce of the expressed juice. A syrup made of the juice is kept in the shops.

RHUS FOLIO ULMI, common *Sumach*, has a long, creeping, woody root, and is a shrub that grows sometimes to the height of a tree; the leaves are oblong, pointed, hairy, winged, reddish, dentated on the edges. The flowers grow in bunches among the leaves of the branches, at the top, and are of a whitish yellow colour; they are composed of five leaves, disposed in the form of a rose, sustained by a calyx, and divided into five parts. The pistil turns to a flat, oval, membranous, greenish capsule, that contains a single seed, almost of the shape of a kidney. It grows plentifully in the southern parts of Europe, as also in Turkey, where the branches are used for tanning of leather. This is not so common in England, as those brought from America, which are the *Virginian Sumach*, improperly called the *Stag's horn tree*; *New England Sumach*, with loose herbaceous panicles, and smooth branches, the *Canada Sumach*, with a longer leaf, smooth on each side, and the *Swart Virginian Sumach* with narrow leaves. The first of these is very common in gardens, and produces bunches of small flowers in June, at the extremities of the branches, which are succeeded by seed included in red covers. They may be all propagated by seeds, which should be sown soon after they are ripe, and the plants will come up the following spring. The leaves and fruit have been sometimes used in decoctions, for fluxes of the belly, and against internal hemorrhages.

RIBES VULGARIS, *the red Currant bush*, rises to the height of two or three cubits, and has a bay or ash-coloured bark. The leaves are like those of the vine, but much less, and are smooth, of a dark green above, but covered with a soft down beneath. The flowers grow in bunches, and are composed of five purple petals, placed in the form of a rose, and are somewhat in the shape of a heart. The calyx is in the form of a basin, divided into five segments, and the hinder part turns to a berry, green at first, and afterwards red, which is universally known. Besides this, there are other sorts, as *the Dutch red Currant*, *the common white*, *the large Dutch white*, *the Champaign*, *the Gooseberry leaved*, *the small wild*, *the black*, and *the yellow striped leaved*; *the common Currant*, with leaves beautifully variegated with green and white; *the white Currant with striped leaves*; *the striped gooseberry-leaved Currant*; *the black Currant with striped leaves*; and *the American black Currant*. The manner of the flowering of this last is very different from the other sorts; but the fruit is not much valued. They may be all propagated by cuttings, from September to March, but autumn is best, and they will thrive almost in any soil or situation. Red currants, and their preparations, are generally accounted good to abate internal heats, and to restrain the effervescence of the blood; as they are somewhat astringent, they strengthen the stomach, excite an appetite, and are good against vomiting. Currants eaten too freely will cause loosenesses, attended with gripes, and are hurtful to the lungs.

The leaves of black CURRANTS have been accounted by some a sort of a panacea, and in some parts of France, after they have been bruised in wine, and the juice pressed out, it has been given to half a pint, twice a day, for eight days together, to those that have been bitten by a mad dog, that is, in the morning fasting, and three or four hours after dinner. Others say, that four ounces of the juice of the leaves, or rather the infusion in wine, for twenty-four hours, given to four ounces in a morning fasting, will cure the dropsy. In the Philosophical Transactions it is said, that the

gelly of black currants, swallowed down leisurely in small quantities, is a specific against the quinsy; and in winter, when the gelly cannot be had, a decoction of the leaves and bark in milk, used as a gargle, is said to cure all inflammatory distempers of the throat.

ROSA PALLIDA, *five* INCARNATA, *the pale Rose*, has a long, hard, woody root, that sends forth several stalks, which form a shrub, that divides into firm long branches, covered with a dark greenish bark, and often furnished with strong prickles; the leaves grow by pairs, and are generally seven in number, on one rib, which is terminated by a single leaf; these are roundish, dentated on the edges, and rough to the touch. The flower is sometimes single, and composed of five large petals or leaves, with several yellow apices in the middle. It is sometimes double, and then the external petals are a little larger than the internal, and of an agreeable red or carnation colour, with a very sweet, though weak smell. When the flower is falling off, the calyx turns to an oval fruit, in the shape of a small olive, with a rind that is a little fleshy, and consists only of a single cell, full of angular, hairy, whitish seeds. It flowers in *May* and *June*, and is cultivated in gardens. The distilled water from these roses is accounted good against inflammations of the eyes; and some say when it is given inwardly, from one ounce to fix, it will stop loosenesses and spitting of blood; but the syrup of pale roses is solutive, and is given from an ounce and a half to two ounces.

ROSA DAMASCENA PALLIDA, *the damask Rose*, has a root like the former, from whence arise stalks or stems, to the height of ten or twelve feet, which are thick, strait, and armed with reddish strong thorns, that are not so flat as those of the former; the leaves are also set at greater distances, are less wrinkled, more pointed, and are green above, and whitish below; they are dentated on the edges, and are sometimes seven, and sometimes nine on the same rib, placed by pairs opposite to each other, and terminating in a single leaf; it has crooked thorns on the base. Some of these rose bushes have flowers, consisting only

of five petals, that have a very sweet smell. It is cultivated in gardens, and flowers in autumn. That with double flowers is not of a distinct kind, but only a variation of the former. The flowers are solutive, or rather purging; for two pugils infused in veal broth, and taken in a morning, will purge very well.

ROSA ALBA, *the white Rose*, has a root like the former, which sends forth stalks to the height of eight or ten feet, which are thick, woody, and armed with crooked pedicles. There are sometimes five, and sometimes seven, oblong, smooth, crenated leaves on one rib, that are sometimes prickly at the base. The flowers which grow at the extremity of the branches are large, beautiful, and have a sweet smell. It is cultivated in gardens, and generally flowers in *May* and *June*. All authors agree, that they are astringent, and the distilled water is made use of, in some parts, against inflammations of the eyes.

ROSA RUBRA, *the red Rose*, has a creeping, strong, woody root, with several stems, that are lower than those of the former, covered with a green bark, armed with prickles. The flowers are of a beautiful red, with a sweet agreeable smell; it is cultivated in gardens, where it flowers in *June* and *July*. These are reckoned astringent, cleansing, and proper to strengthen the stomach, to stop vomiting, fluxes, and hæmorrhages. The dose of the conserve is from two drams to half an ounce, and is given against coughs, and in consumptions.

ROSA SYLVESTRIS VULGARIS, *the Dog-Rose*, has a long, creeping, hard, woody root, that sends forth long thick branches, armed with strong thorns or prickles; the leaves are large, oblong, smooth, and like those of the common rose. The flowers consist of five white petals, with a mixture of red or carnation, and they fall off with the least blast of wind; they are succeeded by oval oblong fruit, which are green at the beginning, and as red as coral when they are ripe. The rind is fleshy, and has a sweetish tart taste; the seeds are angular, white, hard, and wrapped up in strong hair, that readily separates from them. It grows every where near or in hedges with-

out cultivation. The fruit is called hips; and there is a conserve made of them kept in the shops. These flowers are purgative, like those of other roses; but the conserve is recommended in fluxes of the belly, to moderate the heat of the bile, and to abate the sharpness of urine; the dose is from two drams to half an ounce.

ROSMARINUS HORTENSIS ANGUSTIORE FOLIO, *narrow leaved garden Rosemary*, has a slender, small, fibrous root, that sends forth a stalk that becomes a shrub, which in some countries rises to the height of three or four feet; the leaves are whole, narrow, hard, stiff, of a brownish green above, and white below. The flower consists of a single petal, of a pale blue colour, that is labiated, and whose upper lip, or crest, is cut into two parts, and is turned backwards, with crooked stamina or chives; but the upper lip or beard is divided into three parts, the middlemost of which is hollow like a spoon; the flower-cup is dentated, being divided into three cells, from whence arises the pistil, attended with four embryos, that turn to as many roundish seeds, inclosed in the flower-cup. It is cultivated in gardens, and flowers in *April, May, and June*; but it grows wild in many hot countries, such as *Spain, Italy, and the southern parts of France*. However, they are hardy enough to bear a moderate winter in these parts in the open air, provided they are planted on a poor, dry, gravelly soil. Besides this, there is *the broad leaved garden Rosemary*; *the gold striped Rosemary*; *the narrow leaved silver striped Rosemary*; *the Rosemary of Almeria, with a large spiked purplish flower, and the broad leaved Rosemary with an elegant striped leaf*. They may be all propagated by planting slips or cuttings at the beginning of the year, upon a bed of light fresh earth, and they should be transplanted in the beginning of *September*, to the places where they are designed to grow.

The flowers and leaves are made use of in medicine, and are used both internally and externally. They strengthen the brain, are good against the palsy and epilepsy, as well as obstructions of the viscera, they restore

restore the tone of the solids, and incide and attenuate gross humours. The water wherein the flowers and leaves are steeped for a night, is good for the jaundice, and it strengthens the memory and sight. Hungary water is made from the flowers, cups, and young leaves of this plant, after they have been digested in spirits of wine, and the spirit distilled off; the dose of this is a small spoonful, in a glass of water. The conserve of the flowers is cordial, stomachic, and cephalic, and the dose is from a dram to half an ounce. *Boerhaave* looks upon the essential oil, to be the best remedy against the epilepsy; and a few drops of it are to be given in wine; the usual dose of this is five or six drops, *won et al.*

ROS SOLIS, *Sun-dew*, has a fibrous, slender, hairy root, that sends forth several long, small, hairy branches, on which there are small roundish leaves that are hollow like an ear-picker, and of a pale green; the stalks are adorned with a reddish, hairy fringe, and are hollow; from whence transudes drops of a fluid into the hollow of the leaves, insomuch that their hair is always moist, as it were with dew in the driest seasons. From among the leaves there arise two or three stalks, to the height of six inches, that are slender, round, reddish, tender, without leaves, and on whose top are small whitish flowers, with several petals placed in the form of a rose. The flower-cup is in the shape of a dentated horn, and the flowers themselves hang on one side. They are succeeded by small fruit, of the size of a grain of wheat, which contains several seeds. It grows in deserts, wild, sandy, moist, marshy places, and most commonly among water moss of a whitish-red colour, and flowers in *June* and *July*. This plant is said to be pectoral, and good against all disorders of the lungs; the dose is a dram in powder, and two drams in infusion. *Boerhaave* recommends this last in the vertigo, the epilepsy, and disorders of the eyes.

RUBIA TINCTORUM SATIVA, *cultivated dyer's Madder*, has a long, creeping, succulent root, divided into several branches, and of the thickness of a goose-quill. It is woody, and red both without and within. It sends forth long branches, that are square, geniculated,

culated, or knotty, and rough; and from each knot there proceed five or six oblong leaves, that surround the stalk in the form of a star; they are hairy, and crenated all round, with small furrows. The flowers grow on the tops of the branches, and consist of a single leaf, which is cut into four or five segments, expanded at the top; the flower-cup becomes a fruit, composed of two juicy berries closely joined together, which are black when ripe, and full of juice; each contains a seed, which is generally hollowed like a navel, and is almost round. It flowers in *July* and *August*, is cultivated in many parts of *Europe*, and is made use of for dying. Though the propagation of it in *England* has been long neglected, it is now cultivated with greater spirit than ever, by which we are supposed to save near thirty thousand pounds annually. The root is taken out of the earth in *May* and *June*, and they dry it for transportation. The root is one of the five lesser opening roots, and is said to resolve gross humours, and to be useful in obstructions of the viscera. *Berbaave* affirms, it is good against the gravel, and cleanses the kidneys and bladder from mucous matter. The dose of the root in powder is a dram or two, and in decoction from half an ounce to an ounce. It has one very uncommon property, that is, it will turn the bones of those animals red, that have fed upon it for some time.

RUBUS VULGARIS FRUCTU NIGRO, the common Bramble or Blackberry bush, has a slender creeping, knotty root, that sends forth several long, weak, bending, greenish, red, angular, pithy branches, that are armed with strong crooked prickles, which lay hold of the garments of those that pass by. The leaves are oblong, pointed, dentated on the edges, rough, and brown above, but whitish below; they are placed by three's, or five's, on the same pedicles, and never fall off in winter, till others come in their places. The flowers on the end of the branches consist of five petals or reddish leaves, disposed in the form of a rose, and the flower-cup is cut into five parts, in the middle of which there is a pistil, surrounded with a great number of stamina, or chives. These are succeeded by

by round or oval fruit, nearly like mulberries, that are composed of several berries, full of juice, closely joined together, that are red at first, and black when ripe; each of these contain an oblong seed. It grows almost every where in the fields and woods, and flowers in *June, July, and August*; the fruit is ripe in autumn. The root is cleansing, astringent, and absorbent; and a syrup made of the fruit is recommended in heat of urine. *Boerhaave* affirms, that the roots taken out of the earth in *February or March*, and boiled with honey, are an excellent remedy against the dropsy. The leaves pounded and applied to ringworms and ulcers of the legs, heal them in a short time. The fruit when ripe is cooling, and quenches thirst.

RUBUS IDÆUS SPINOSUS FRUCTU RUBRO ET ALBO, *the Raspberry bush*, has a long creeping root, divided into several branches, and sends forth several stalks, to the height of a man, armed with thorns, that are not very prickly; the leaves are like those of the bramble, but more tender and soft, and of a brownish green above, but whitish below. The flowers are white, and consist of five petals, disposed in the form of a rose, and the calyx is divided into five parts; from the center of which the pistil arises, with many stamina, that afterwards turn to the fruit, which is larger than a strawberry. It is round, a little hairy, and composed of five berries, joined closely together; the colour is generally red, and they are full of a rich vinous juice, and each contain a seed. It grows wild in moist shady woods, and is cultivated in gardens and orchards; it flowers in *May and June*, and the root is ripe in *July*, but it will not keep. There are other sorts of raspberries, and particularly one, that has white fruit; but they have all the same qualities, and are said to be cooling, cordial, and to strengthen the stomach. They agree with people of hot constitutions, and there is a syrup made with them, that is kept in the shops.

RUSCUS LATIFOLIUS FRUCTU FOLIO IN NASCENTE, *narrow leaved butcher's broom, or Alexandrian laurel*, with the fruit growing on the leaves, has a long

a long, white, hard, knotty, fibrous root, that sends forth stalks to the height of two feet, which are small, flexible, green, round, and furnished with pretty thick, broad, nervous, bending leaves, of a beautiful green, and resembling those of the common bay tree. The flowers proceed from the large nerve of the leaves, and are in the shape of little bells, but without pedicles; they are small, and of a greenish or pale yellow, with a pistil in the middle, that becomes a soft roundish fruit or berry, that is red when ripe, and contains two seeds as hard as horn. This shrub grows wild in mountainous places, and is cultivated in gardens. It flowers in summer, and the fruit is ripe in autumn. The roots are said to be aperient, and to be good in a suppression of urine; the leaves are vulnerary, and proper to cleanse and dry moist ulcers.

RUSCUS MYRTIFOLIUS ACULCATUS, *the common Knee-holly, or butcher's broom*, has a thick, crooked, warty, hard, creeping, white root, furnished with thick long fibres, and sends forth stalks to the height of two feet, that are tough and hard to break; and are furrowed, and divided into several branches. The leaves are like those of the myrtle, but more stiff and rough, pointed, prickly, nervous, and without pedicles; they are always green, and have a bitter astringent taste. The flowers grow in the middle of the leaf, and consist of a single petal, cut into six parts, whose stamina, being united, are in the shape of a bell, but there is no calyx. These are succeeded by round berries, as large as peas, somewhat soft and red when ripe. It grows in rough, stony places, and in woods, forests, and hedges; it flowers in *April* and *May*. There proceed tender shoots from the roots in spring, that are green, and may be eaten as asparagus. If they are suffered to grow, they become leafy, woody, and tough; and in some places they make brooms with them. This plant is said to incise gross humours, and to carry them off by urine; and the root is one of the five greater opening roots. The dose is from half an ounce to an ounce in decoction, and has been recommended in the jaundice, dropy, and gravel. *Berhaave* affirms, that the decoction of the leaves, in white wine,

wine, is an excellent remedy in the gravel and dropſy, and the doſe is a glaſs in a morning faſting; but it muſt be continued for ſome time.

RUTA HORTENSIS LATIFOLIA, *the common broad leaved garden Rue*, has a woody root, furniſhed with a great number of fibres, and ſends forth ſtalks in the form of a ſhrub, that ſometimes riſe to the height of five or ſix feet; they are as thick as one's finger, woody, divided into ſeveral branches, and covered with a whitish bark. The leaves are divided into ſeveral ſegments, and are ſmall, oblong, ſmooth, of a ſea-green colour, and placed by pairs in a rib, terminating in a ſingle leaf. The flowers grow on the tops of the branches, and generally conſiſt of four ſomewhat oval leaves, of a pale yellow; the piſtil ariſes out of the flower-cup, which turns to a fruit, conſiſting of four capſules, fixed to an axis, that are full of angular ſeeds, in the form of a kidney. It is cultivated every where in gardens, flowers in June, and continues green all the winter.

RUTA SYLVESTRIS MAJOR, *the greater wild Rue*, is ſomewhat like the garden rue, but ſmaller, and the leaves are divided into longer ſegments, which are alſo more narrow, and of a darker green. It grows in the ſouthern parts of Europe, in rough, ſtony, mountainous places. They both have the ſame virtues, and have a diſagreeable ſmell, with an acrid bitter taſte. The leaves, when in perfection, will bliſter the ſkin, if much handled, and are ſaid to be inciding, attenuant, and diſcuſſive; therefore they are proper, as they have alſo a ſtimulating quality, to quicken the circulation of the fluids, to diſſolve groſs humours, and to open obſtructions of the glands. *Barbaco* had a high opinion of it, and affirms nothing can be more proper to promote ſweat and perſpiration, and to cure the hyſteric paſſion, and the epilepsy. An extract, made with the rectified ſpirit contains the whole virtue of the rue. The doſe of the juice is to two ounces; but the leaves are beſt for thoſe that can eat them; or they may be taken in powder, from a ſcruple to a dram, or the infuſion may be drank as tea.

SABINA MAS, *the common Sabine*, has a strong woody root, that sends forth a stem or shrub, that extends more in breadth than in height, and is always green. The leaves are like those of *German tamarisk*, but are more hard and thorny, and have a strong disagreeable smell, with an acrid burning taste. On the top of the branches there are catkins or flowers, that have three stamina without petals, and which are not succeeded by any fruit; however, if the shrub be very old, it sends forth small greenish flowers, that are succeeded by small flattish berries, less than juniper berries, that are of a blueish black when ripe. It is cultivated in gardens, but in our climate seldom or never yields any fruit.

SABINA FOLIO CUPRESSI, *the berry-bearing upright Sabine*, has a root like the former, but produces a higher stem, for it rises to a sort of a tree, whose wood is reddish within, and is covered with a reddish pretty thick bark. The leaves are like those of the cypress tree, but more compact, with a strong penetrating smell, and a bitter, aromatic, resinous taste. The flowers consist of three pointed petals, as well as the calyx, which is divided into three parts, and is of a yellowish colour. The berries are roundish, fleshy, and on the lower part there are three tubercles, with a navel, armed with three small teeth, and they contain three oblong stones, that are convex on one side, and angular on the other. It grows among mountains, woods, and other uncultivated places, and is also planted in gardens. The first is only used in medicine, and is inciding, penetrating, and aperient. The dose of the leaves in infusion, is half an ounce, and, in powder, to a dram, in a glass of white wine. The distilled oil, taken upon a lump of sugar, has the same virtues, and is employed by some to kill worms. This plant is a good remedy for opening obstructions of the viscera, proceeding from a weakness of the vessels, and the clamminess of the fluids.

SALICARIA, *fr. LYSMACHIA PURPURA*, *purple-spiked Willow herb, or Loose Strife, with blue leaves,*

leaves, has a thick, woody, white, perennial root, with branches that sometimes rise to the height of a man, that are stiff, angular, branched, and reddish. The leaves are oblong, pointed, narrow, and of a deep green; they proceed from the knots of the stalks by pairs, and sometimes by threes, but very seldom by fours; they surround the stalks by intervals, and have a dry astringent taste. The flowers are verticillated in the middle of the branches, and are collected in spikes, of a fine purple colour, and each consists of six leaves or petals, in the form of a rose, with twelve stamina of the same colour, placed in the middle. The pistil rises from the middle of the flower-cup, and turns to a husk, or oblong pointed capsula, divided into two cells, full of small seeds. It grows in moist marshy places, and by the sides of waters and rivers; it generally flowers in *June* and *July*. This plant is detersive, astringent, vulnerary, and cooling, but is seldom used in medicine, though some pretend it is an excellent remedy against the bloody-flux.

SALIX VULGARIS ALBA ARBORESCENS, *the common white Willow tree*, has a long, woody, white root, that produces a pretty large tree, with many firm green branches, covered with a smooth soft bark; the wood is white, pliant, and difficult to break. The leaves are long, narrow, downy, whitish, soft, and more or less dentated on the edges. The flowers and fruit grow distinctly from each other, and the male has only catkins, or long scaly spikes without petals, but there are two stamina in the center. The female willow has catkins like the former; but they have an oval, pointed pistil, somewhat longer than the fruit, which afterwards becomes a bivalved capsula of the same shape, full of oval tufted seeds. It grows every where in moist marshy places, and on the sides of brooks and rivers.

SALIX CAPREA *sen* MINOR, *sen* SALIX LATIFOLIA ROTUNDA, *the round leaved Willow*, has a root like the former, which produces a pretty large shrub, covered with a whitish bark. The leaves are roundish, broad, nervous, of a deep green above, and whitish and downy below, and the pedicle is

often furnished with two small leaves, cut like ears; the catkins and flowers grow in distinct places, and it delights in moist woods, and along the sides of rivers and ditches, and is common in hedges. It flowers in *March* and *April*, and the wood, though more brittle than the white willow, serves to make hoops for barrels. The bark, leaves, and catkins, are said to be cooling and astringent, and they have been used in decoctions, and in all kinds of hæmorrhages, but they are now out of use.

SALVIA MAJOR, *the greater or common Sage*, has a perennial, hard, woody, fibrous root, with woody, branched, hairy, white, green stalks, generally square, with leaves placed opposite to each other; these are oblong, broad, obtuse, wrinkled, rough, and whitish, inclining to purple, and sometimes other colours; they are downy, thick, have a little juice, and are crenated on the edges. The flowers grow in spikes on the tops of the branches, and consist of a single labiated petal, with two stamina; they are of a blueish colour, inclining to purple, and are contained in a large calyx, in the shape of a horn, that is cut into five segments, and has the smell of turpentine. These are succeeded by four roundish blackish seeds, contained in a husk, that before was the flower-cup. It is cultivated in gardens, and flowers in *June* and *July*.

SALVIA MINOR, *five PINNATA*, *Sage of Virtue*, has a root like the former, with several woody, whitish, downy stalks, as long as those of the common sage; but the leaves are less, whiter, wrinkled, rough, and generally attended at the base with two small leaves, in the shape of ears or wings. The smell and taste are stronger, more penetrating and aromatic. The flowers and seeds are like the former, and it is cultivated in gardens.

SALVIA HISPANICA, *Spanish Sage*, with a *lanceoloid leaf*, somewhat resembles the former, but is less, and the leaves are narrower, and more white, as well as the flowers. It flowers in summer, but is very tender, and will not bear the cold very well. They may be all planted by slips, during any of the summer months, observing to shade and water them till they have

have taken root; after which they may be taken up and planted in a dry soil, where they may have the benefit of the sun. Sage of virtue is by most accounted the best, though the properties of all are much the same; they are cephalic, and very good against the apoplexy, epilepsy, palsy, and trembling of the limbs. They are all used in the manner of tea, against any of the disorders abovementioned, as well as for a preservative, and are very good for disorders of the brain, to promote the circulation of the fluids, to strengthen the stomach, and to help digestion. It is commonly said, that the *Chinese* wonder we should buy their tea, when we have so much sage of our own, which they take to be much more excellent. As to outward use, the leaves and flowers are often employed in fomentations, to strengthen the nerves, and to disperse the swellings of wounds.

SAMBUCUS FRUCTU IN UMBELLA NIGRO, the common Elder tree with black berries, has a woody, long, whitish root, and sometimes grows to a middle sized tree. The branches are large, round, and full of a white pith, that is green at first, and afterwards grey. The trunk is covered with a rough, ash-coloured bark, full of cracks, under which there is another, which is green, and is used in medicine. There are five or six leaves that grow on one rib, which are dentated on the edges, and each rib is terminated with a single leaf, that is larger than the rest. The flowers grow at the tops of the branches in umbels, and consist of a single petal divided into five segments, that expand in the form of a rose; they are white, small, and have five stamina, with roundish apices; these are succeeded by soft, round, juicy berries, that are green at first, but black when ripe, and there are generally three seeds in each. It grows almost every where, in all parts of *Europe*, but delights in valleys and moist shady places. It flowers in *May* and *June*, and the berries are ripe in autumn. All parts of this tree are in use, and are generally known to have a purging and aperient quality. The dose of the rob of elder-berries is from a dram to half an ounce, in the

bloody-flux, and to promote urine and sweat. The use of elder-berries in made wines is universally known.

SANICULA, *Sanicle*, has a thick root above, that is fibrous below, blackish without, and white within. It sends forth several broad roundish leaves, that are a little hard, smooth, dentated on the edges, and of a fine green shining colour; from among these there arises a stalk to the height of a foot, that is smooth, without knots, and reddish towards the root, and on the top there are several small flowers collected into an umbel, consisting of five white or red petals, placed in the form of a rose, with five stamina, and roundish apices. The petals are generally bent back to the calyx, on which they rest, and which turns to a fruit composed of two seeds, convex on one side, flat on the other, and prickly at the points, by which means they stick to the garments of those that pass by. Some of the flowers are always barren. It delights in shady woods, and in a flat moist soil, and flowers in *June*. It has been long noted for its vulnerary virtues, and may be used in the manner of tea; but it is not now depended upon for any such purpose.

SATUREIA HORTENSIS, *garden Savory*, has a small, single, woody root, with stalks that rise to the height of a foot, or a foot and a half, which are round, reddish, and a little hairy and knotty. The leaves are small and oblong, like those of hyssop; they are a little hairy, and seem to have several holes, with a smell like that of thyme, but weaker. The flowers are small and labiated, consisting of a single petal; whose upper lip or crest is divided into two parts, but the lower lip or beard is divided into three; and has the middle part crenated; they proceed from the places where the leaves join to the stalk, somewhat loosely, but not in whorls or spikes, like most of this kind. They are white or purplish, with four silky stamina, that are succeeded by as many brownish round seeds, contained in a capsula, that was the cup of the flower. It is cultivated in gardens, by sowing the seeds on a bed of fresh light earth, in *March*; and when the plants are come up, they must be moved into other beds, placing them about four or
five

five inches asunder each way. It flowers in the summer. It is aperient, inciding, and strengthening, but it is chiefly cultivated for the use of the kitchen, and is very proper for cold stomachs.

SAXIFRAGA ALBA RADICE GRANULOSA, *white round leaved Saxifrage*, has a root that sends forth several fibres, at the top of which there are several tubercles, somewhat larger than coriander seeds, which are partly purple and partly white, and of a bitterish taste. The leaves are almost round, crenated on the edges, and pretty much like those of ground-ivy, only they are thicker and whiter. Among these the small stalks rise to the height of a foot, and are tender, hairy, purplish, and branched. The flowers grow on the top, and have five white leaves or petals, placed in the form of a rose, that have six stamens, with roundish apices. The flower-cup is divided into several segments, out of which the pistil arises, that, together with the flower-cup, turns into a roundish fruit, with two horns, and two cells full of small, longish, reddish seeds. This plant is common in moist meadows, in divers parts of *England*, and flowers in *May*. It is said to be good in disorders of the breast, and particularly in the moist asthma; but it is now almost neglected.

SAXIFRAGA VULGARIS, *Meadow Saxifrage*, has a perennial, long, thick, wrinkled root, white within, and hairy at the top, with stalks that rise from one foot to two in height, which are thick, round, furrowed, smooth, pithy, reddish towards the bottom, and branched. The leaves are smooth, of a deep green, and divided into longish, narrow-pointed, stiff segments, with an acrid taste. The flowers, which grow on the tops of the branches in umbels, have five leaves or petals in the form of a rose, of a whitish yellow. These are succeeded by fruit, composed of two short furrowed seeds, convex on one side, and flat on the other; they have a strong pleasant smell, and a vinous aromatic taste. It grows almost every where in moist places, and has been looked upon as exceeding good for the gravel, the root being a powerful diuretic; but it is not now much used for that purpose.

SCILLA VULGARIS RADICE RUBRA, *common red Squill*, has a root like an onion, or a bulb, sometimes as large as a child's head, composed of thick, red, juicy, clammy coats, placed one upon another, and underneath there are large fibres. It sends forth leaves a foot in length, and as broad as the hand, that are fleshy, green, and full of a clammy bitter juice. In the middle of these there arises a stalk to the height of a foot and a half, on the top of which there are flowers, with six white petals, but without a calyx, disposed in a ring, and as many oblong stamina. These are succeeded by roundish fruit, on which are three corners, and they are divided into three cells, full of roundish black seeds. The root only is in use.

SCILLA RADICE ALBA, *the white Squill*, has a large root, but less than the former, and composed of several white coats, full of a clammy juice, and furnished underneath with many pretty thick fibres. It sends forth an upright naked stalk, to the height of a cubit, adorned at the top with several white flowers, in the form of a star. The flowers appear before the leaves, and after them six thick, fleshy, large, deep, green leaves, proceed from the root, and lie upon the ground. This, as well as the former, grows in sandy places near the sea, and flowers in *August* and *September*. The seeds are ripe in *November* and *December*. These roots are brought from the *Levant* and *Spain* every year, and deserve to be cultivated in every good garden, for the beauty of their flowers. Those roots should be chosen that are fresh, of a middle size, sound, heavy, firm, and full of a clammy, bitter, acrid juice. They are excellent in disorders of the lungs, caused by a clammy, viscid phlegm; for which reason they perform wonders in the fits of the moist asthma, and in a disposition to a dropsy. However, in swellings arising from the dropsy, and in the inflammation of the kidneys, they are best given with nitre; that is, there should be double the quantity of this to that of the root; and the dose of the latter, in powder, is from four to ten grains. When given in this manner, it almost always operates as a diuretic. There are several preparations of this root kept in the shops.

SCORDIUM ALTERUM, *five* **SALVIA AGRESTIS**, *wood Sage*, has a woody, flexible, creeping, fibrous, perennial root, that sends forth several square, hairy, purplish, branched, pithy stalks, to the height of two or three feet. The leaves resemble those of sage of virtue, only they are broader and softer, like balm; they are also wrinkled, downy, of a dirty green, dentated on the edges, and have a bitter taste. The flowers grow in spikes, and consist of a single labiated petal, like those of *Germander*, and have the same shape, but are of a pale white colour, with four purple stamina, that are succeeded by four roundish, blackish seeds, contained in a capsula, that was the cup of the flower. It grows in uncultivated sandy places, and among hedges. It flowers in the summer, and continues a long while in flower. It has somewhat of a garlick smell, and is said to strengthen the stomach, kill worms, and promote urine; but it is now neglected.

SCORSONERA, *five* **SCORZONERA**, *Viper's Grass*, has a root a foot long, as thick as one's thumb, blackish without, white within, and easy to be broken; it is full of a sweetish milky juice, and some account it good eating. It sends forth a round, furrowed, hollow stalk, to the height of two feet, covered with a little down, and divided into several branches. The leaves are long, pretty broad, smooth, and embrace the stalk by their base; they are sometimes a little sinuated or curled at the edges, terminating in a long narrow point, and are of a dark green colour. The flowers grow on the tops of the branches, and are large, yellow, and composed of semi-florets, with a long, slender, scaly flower-cup; these are succeeded by long white seeds, tufted at the top. It is cultivated in many kitchen gardens about *London*, and flowers in *May* and *June*. The root is accounted good, both for food and phyfic; for it is said to strengthen the stomach, and to promote urine and sweat. Some take the boiled root to be very good food, and affirm it agrees with all ages and sexes. The juice of the root, taken to three ounces in a morning fasting, *Boerhaave* affirms to be good in hypochondriac diseases, and to open obstructions of the viscera.

SCROPHULARIA AQUATICA, *water Betony*, has a thick perennial root, furnished with long fibres, and several stalks, that rise to the height of two or three feet; these are square, thickish, reddish in some places, and green in others, hollow within, pretty tender, full of juice, smooth, and branched. The leaves are like those of the former, but more blunt at the end, and twice or thrice as large; they have a disagreeable smell and taste. The flowers are like those of the former, but a little larger, and of a reddish, rusty colour. These are succeeded by round pointed fruit, divided into two cells, that contain very small brown seeds. It is common in all watery places, and flowers in *July* and *August*. It is said to be an excellent vulnerary, and to have the same virtues as the former in other respects; but it is not now in much esteem.

SEDUM MAJUS VULGARE, *common great House Lark*, has a small fibrous root, with many oblong, thick, flat, pointed, fleshy, juicy leaves, that grow close to the ground; they are always green, and ranged in a circular order, in the form of a rose, they being convex without, and flattish within, and have a very little down on their edges. A thick, reddish, pithy stalk arises from the middle of these, clothed with the same sort of leaves as the former, only they are more narrow and pointed. It is divided at the top into several branches, on which are flowers, with five petals, placed in the form of a rose, and of a purple colour, with ten stamina, that have roundish apices or summits. The pistil rises from the flower-cup, which afterwards turns to a fruit, composed of many seed vessels, resembling husks, that are collected into a sort of a head, and are full of small seeds. It grows on the top of old walls, and on the roofs of houses; it flowers in *July*, and the stalk withers away in the autumn, when the seed is ripe. This plant is said to be cooling, cleansing, and astringent, and some give four ounces of the juice, to cure intermitting fevers, when there is no cold fit.

SEDUM PARVUM ACRE FLORE LUTEO, *Wall Pepper, or Stone Crop*, has a small fibrous root, with

with several low, short, slender stalks. The leaves are very small, somewhat thick, fat, pointed, triangular, and full of juice; the flowers are yellow, and consist of six petals, in the form of a star, with many stamina and apices, or summits, of the same colour in the middle, that are succeeded by several sheaths or seed vessels, collected in the form of a head, and full of small seeds. It grows almost every where suspended by its roots, or lying on old walls, and on the tops of cow houses; it flowers in *June*, and has a pungent, hot, burning taste. It is looked upon by some as an excellent remedy for the scurvy, and is particularly good for ulcerated gums, occasioned by that distemper.

SENECIO MINOR VULGARIS, *common Groundsel*, has a small, whitish, fibrous root, with several round, furrowed, hollow stalks, that rise to the height of a foot; these are sometimes reddish, branched, and hairy in certain places, exposed to the sun. The leaves are oblong, jagged, dentated, placed alternately, fixed to the stalks by a broad base, and terminate in a blunt point; the colour is of a dark green, and the flowers are placed in bunches at the top of the stalks; they consist of many yellow florets, disposed in the form of stars, and contained in a flower-cap, consisting of a single leaf, with five small stamina, that have cylindric apices or summits in the middle; these are succeeded by downy seeds, that altogether form a white head. It grows every where in fields, and by the way sides, in sandy places exposed to the sun; as soon as the leaves wither, others arise; insomuch that it continues green all the year, and flowers in all seasons. It is accounted emollient and resolvent, and the juice, given to two ounces, kills worms. Some account it good in the jaundice, and even in spitting of blood. *Boerhaave* recommends the juice, mixed with oxycrate, as a gargle, in inflammations of the throat.

SERPILLUM VULGARE MINUS, *Mother of Thyme*, has a small, woody, perennial, brown root, furnished with capillary fibres, as also several small, square, woody, reddish, and low stalks, that are somewhat hairy. The leaves are small, green, roundish,

nervous, a little broader than those of common thyme, and have an acrid, aromatic taste. The flowers grow on the tops of the stalks, disposed like a head, and generally of a purple colour; they consist of a single labiated petal, that has two lips, and is placed in a calyx, made like a horn. These are succeeded by small roundish seeds, contained in a capsula, that was the cup of the flower. It grows in uncultivated mountainous, dry, sandy, stony places, and flowers in the summer. There are several sorts, but they have all the same virtues, and are accounted cephalic and stomachic, and may be used in the same manner as common thyme, though they are not quite so efficacious.

SILICUASTRUM, *frut* ARBOR JUDÆ, *Judas's tree*, has a thick, hard, woody, perennial root, that sends forth a trunk, which in time becomes a middle sized tree, and is divided into branches at considerable distances from each other; the bark is of a blackish purple colour, on which papilionaceous flowers appear in the spring, of a beautiful purple colour, and several of them are placed together; they are composed of five petals or leaves, the two lowermost of which are larger than the upper, which is contrary to other flowers of the leguminous kind. The pistil rises from the center of the flower-cup, is surrounded with stamina, and afterwards becomes a long flat pod, containing several seeds in the shape of kidneys. After these the leaves appear, which are round, and placed alternately on the branches; they are nervous, green above, and whitish below; the pods that contain the seeds are six inches in length, and very flat, purple, membranous, semi-transparent, and made in some sort like the sheath of a knife. This tree grows in hot countries, near rivers and brooks, on mountains and in valleys; it is cultivated in gardens for its beauty, and flowers in *April* and *May*. It was formerly preserved in green-houses as a curiosity; but of late years has been transplanted into the open air, where it thrives very well. It may be propagated by sowing the seeds on a bed of light earth, towards the middle of *April*, and earth should be sifted over them to the thickness

ness of half an inch; if the season proves wet, the bed should be covered with mats. Some few of the plants rise the first year, but the greatest number in the second. About the middle of *April* following, just before they begin to shoot, they should be taken up carefully without breaking their roots, and planted in fresh ground as soon as possible. After they have continued here two or three years, they may be removed to the places where they design to remain. It is of little or no use in medicine, tho' the pods are said to be astringent. In the southern parts of *France*, the flowers are eaten as a salad; but they are best when pickled like capers before they open.

SINAPI SILIQUA LATIUSCULA GLABRA SEMINE RUFO, *five VULGARE, common or red Mustard*, has a white, woody, brittle root, furnished with fibres, that sends forth a stalk to the height of four or five feet, which is pithy, hairy below, and divided into several branches. The leaves are large, and much like those of radishes, but smaller and more rough. The small yellow flowers grow at the top of the branches, and consist of four leaves in the form of a cross; the pistil arises out of the flower-cup, which turns to a fruit or pod, divided into two cells by a partition, to which the valves adhere on both sides, and are full of roundish, reddish, or blackish seeds, of an acrid biting taste. This grows wild on the sides of ditches, among stones, and on land newly broken up, particularly in the Isle of *Ely*, where the land has been flooded for many years, and has afterwards been drained. It is also cultivated in gardens, and flowers in *June*.

SINAPI ALBUM, five HORTENSE SEMINE ALBO, *garden or white Mustard*, has a single, woody, white root, furnished with long fibres, and sends forth a stalk to the height of a foot and a half, or two feet, which is branched, hairy, and hollow. The leaves are like those of radishes, and armed above and below with stiff prickly hair. The flowers are small, yellow, in the form of a cross like those of the former, and are succeeded by hairy pods, that terminate in an empty point, and contain four or five round, whitish or reddish

seeds, that seem to be articulated or knotted. It grows wild in fields among the corn, and is cultivated in gardens; it flowers in *May* and *June*, and the seeds are ripe in *July* and *August*. Both kinds have the same properties, though the former is generally preferred. The seeds are stomachic, diaphoretic, antiscorbutic, and are good in hypocondriac diseases, as well as in sleepy disorders. The common use of mustard is known to every one, and is very proper for people of a cold constitution; because it creates an appetite, helps digestion, and attenuates the food. The powder of mustard seed, taken in white wine, is excellent against the scurvy, and some affirm it will cure a quar-tan ague, if taken in hot wine two hours before the fit. Some apply mustard outwardly to cure the hyp-pout, and also lay it to the feet, mixed with other things, in dangerous fevers. The white mustard is used as a salad herb, especially in winter, and in the spring. There are two other sorts of this plant, but these are the most useful.

SISARUM GERMANORUM, *the Skerrit*, has a root composed of several parts, as long as a man's hand, and as thick as the little finger, which are tender, brittle, wrinkled, and fixed to a sort of a neck; they are covered with a thin pale rind, and have a white pulp. The branches rise to the height of two or three feet, and are thick, knotted, and furrowed; the leaves are winged, and placed by pairs opposite to each other, on a rib that terminates in a single leaf, which is longer and broader than the rest; they are greener and softer than those of parsnips, and are slightly crenated on the edges. The flowers grow in umbels on the top of the stalks, and consist of four white leaves, placed in the form of a rose, with as many stamina in the middle. The flower-cup afterwards turns to a fruit, composed of two oblong seeds, which are furrowed on the back, and of a dark colour. It is cultivated in the kitchen garden, and flowers in *June*. It is thought by some to be the most wholesome and nourishing of all kinds of roots, though it is not very common in the gardens near *London*, but for what reason it is hard to say. It may be propagated by sowing the seeds about the middle of
April,

April, upon a moist, rich, loose soil; the plants will come up in *May*, and, when the leaves are decayed, the roots may be taken up for use as they are wanted; they will continue good in the ground from *October* till *March*, after which they are good for nothing. They are accounted good for all ages and constitutions; *Boerhaave* looks upon them as one of the best remedies for pissing and spitting of blood, and would have them dressed several ways, that the patient may feed frequently upon them, especially if inclined to a consumption.

SISYMBRIUM AQUATICUM, *Water-radish*, with dentated leaves, has a long flexible root, furnished with fibres, and has a taste like that of radishes. It sends forth several branched, hollow, furrowed stalks, to the height of three feet; the leaves are large, long, sinuated, dentated on the edges, and especially towards the lower part. The flowers grow on the top of the branches, and consist of four yellow petals or leaves, disposed in the form of a cross; the pistil proceeds from the flower-tup, that afterwards turns to a fruit or pod, which is divided into two cells by a partition, to which the valves adhere on both sides, and contain small roundish seeds. It grows in marshes, brooks, rivers, ditches full of water, and flowers in spring. It is observable, that the leaves differ greatly from each other, according to the places in which they grow.

SISYMBRIUM SILVESTRE, *for RHAPHANUS AQUATICUS*, *Water-radish*, has an oblong white root, as thick as a man's little finger, that has an acrid pungent taste; the stalks, which rise to the height of three feet, are furrowed, hollow, and sometimes reddish. The leaves are oblong, pointed, cut deeply into jags, dentated on the edges, and are placed alternately on the stalks. The flowers grow on the tops of the stalks and branches, and are small, considering the size of the plant; they consist of four yellow petals or leaves, disposed in the form of a cross, with six stamina; they are succeeded by small short pods, divided into two cells, that contain small roundish seeds. It grows in ditches full of water, and in marshy places; it flowers in *June* and *July*. Some account the roots of both

both kinds good to eat, and use them in the same manner as radishes. They are aperient, cleansing, good against the gravel, scurvy, and dropsy; but they are seldom used either for food or physic.

SISYMBRIUM PALUSTRE REPENS NASTUR-TII FOLIO, *Water Rocket*, has a creeping, slender, whitish root, with an acrid taste, but not so strong as that of radish; the stalks are short, furrowed, slightly perforated, and are sometime reddish, and like those of the garden cresses. The flowers grow at the top of the branches, and are small, consisting of four yellow leaves or petals, that are succeeded by small cylindric pods, which are longer than those of the former kinds, and are divided into two cells by a partition, containing several small seeds. It grows on the sides of rivers in moist ditches, and in stony brooks; it flowers in *July* and *August*. It has the same virtues as the two former, but is now made little or no use of.

SISYMBRIUM ERUCÆ FOLIO GLABRO FLORE LUTEO, *Common winter cress*, has a long, pretty thick, white, perennial root, with an acrid taste; the stalks are furrowed, firm, branched, pithy, hollow, and rise to the height of a foot and a half. The leaves are smaller than those of radishes, and are somewhat like cresses; they are of a deep, shining green; but have not so acrid a taste as the root. The tops of the stalks and branches are adorned with long spikes of yellow flowers, composed of four petals in the form of a cross; these are succeeded by slender, long, tender, cylindric pods, full of many small, reddish seeds. It grows on the sides of ditches and brooks, and sometimes in fields; it is also cultivated in gardens for sallads, in some parts of *Europe*; it flowers in *May* and *June*, and continues green all the winter. It is cleansing and vulnerary, and is good in the beginning of a dropsy, made use of in the manner of tea.

SMILAX LEVIS MAJOR, *greater Bind Weed*, has a long, slender, whitish, perennial root, furnished with fibres; and the stalks are long, slender, furrowed, and climb upon trees and bushes, by means of their claspers. The leaves are in the shape of a heart, and are bigger
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and softer than those of ivy; they are also smooth and green, and the flowers are in the form of a bell, and as white as snow. The calyx is oval, and divided into five parts, with as many stamina, and flatish summits. These are succeeded by round fruits as big as cherries, wrapt up in the calyx, and contain two angular or pointed seeds, of a blackish colour, with a reddish cast. It is milky like other plants of the same kind, and grows almost every where amongst hedges and bushes; it flowers in summer, and the fruit is ripe in autumn. This plant is purgative and vulnerary, and the milky juice is of the same nature as scammony; but it must be given in a larger dose, that is, from twenty grains to thirty.

SMILAX LENIS MINOR, *small Bind Weed*, has a very long, slender, creeping, perennial root, with many small, weak, slender branches, that wind round the neighbouring plants. The leaves are in the shape of a heart, but more rough, nervous and small, than the former. The flowers proceed from the places, where the leaves join to the stalks, like small, whitish bells; but they are sometimes reddish or purplish. These are succeeded by roundish, small fruit, containing pretty large angular seeds. It is an anodyne, cleansing, vulnerary plant, and country people often use it to heal wounds, by applying it after it has been bruised between two stones; many are lavish of their praise of this plant on that account. There is another species of this plant, called the rough Bind Weed, with a red fruit; but it is of no use in medicine.

SOLANUM HORTENSE, *Common Nightshade*, of the shops, with black fruit, has a long, slender, hairy, dirty, whitish root, with a firm, angular stalk, that rises to the height of a foot and a half, is of a blackish green colour, and divided into several branches. The leaves are oblong, pretty large, soft pointed, and blackish; whereof some are angular, others crenated, others whole, smooth, and full of a greenish juice. The flowers grow on the branches, a little under the leaves, and consist of a single petal, divided into five parts, and expanded in the form of a star; there are as many yellow stamina, with oblong summits, and a pistil, which afterwards becomes

comes a berry, like those of the juniper-tree; it is green at first, but when it is ripe it is soft, smooth, black, and full of juice. It grows on the sides of highways, near hedges and houses, and flowers in *August* and *September*. Some sorts of this plant have red fruit, and others yellow, which seems to be the principal differences. Some have given the leaves and fruit inwardly, but very rashly; for they are often attended with dangerous consequences, and therefore it is better to abstain from it entirely.

SOLDANELLA MARINA, *Scottish Scurvy grass*, or *Soldanella*, has a small fibrous root, with several slender, pliant, reddish stalks, that creep on the ground; the leaves are roundish, smooth, shining, like those of the lesser celandine, but thicker, and full of a milky juice. The flowers consist of a single petal, in the shape of a bell, and are of a purple colour. The pistil, which rises from the lower part of the calyx, turns to a roundish membranous fruit, that contains angular black seeds. It grows frequently on the sandy shores of the sea, and flowers in summer; the whole plant is dried with the root, in which manner it is sent to us. It has a bitter, acrid taste, that is somewhat saltish, and is looked upon by some as very proper to purge off watery humours, particularly in a dropfy, palsy, and the rheumatism. The dose of the powder, when dried, is from half a dram to a dram.

SONCHUS LÆVIS, *Smooth Sow Thistle*, has a small, white fibrous root, and a hollow, tender, furrowed, purplish stalk, that rises to the height of a foot and a half. The leaves are long, smooth, larger and more tender than those of dandelion, and are dentated on the edges. They are ranged alternately, are full of a milky juice, and some of them embrace the stalks with their broad bases. The flowers grow on the tops of the stalks and branches in bunches, and consist of yellow semi-florets, like those of dandelion, but smaller; these are succeeded by fruit, of a conical shape, that contain oblong, reddish, brown seeds, with a downy tuft. It grows almost every where, and flowers in *May* and *June*; rabbits and hares are fond of this plant.

SONCHUS ASPER, *prickly Sow Thistle*, has a root like the former, but the leaves are more entire, resembling those of endive, and they embrace their stalk with their base; they are of a deep shining green, and furnished with long hard prickles. It grows in the same places as the former, and flowers at the same time; it is full of a milky bitter juice. They are both of little or no use in physic.

STACHYS MAJOR GERMANICA, *base Hoarhound*, has a hard, woody, fibrous, yellowish, perennial root, with several stalks that rise to the height of two feet, which are thick, square, knotted, white, downy, and pithy. The leaves are placed opposite to each other at each knot, and are like those of white hoar-hound, but longer and whiter, and as well downy as dentated on the edges. The flowers are verticillated, and disposed like spikes on the top of the stalks, between the leaves; they are downy without, smooth within, and generally of a purple colour, tho' sometimes white; they consist of a single petal in the form of a tube, cut on the upper part into two lips, the uppermost of which is hollow like a spoon, and erect; but the upper lip is divided into six segments, of which the middlemost is much the largest; the pistil rises from the flower-cup attended by four embryos, that turn to as many roundish blackish seeds, contained in a capsule that was the cup of the flower. It grows in mountainous uncultivated places, and is cultivated in gardens, where it is propagated by seeds; it flowers in *June and July*. It is of little use in medicine, though *Boerhaave* recommends it against the apoplexy and the palsy.

STATICE, *Thrift, or Sea Pink*, has a long, thick, round, reddish, woody, perennial root, with several heads; from whence proceed a great number of long narrow leaves, like those of grals, and of a sea-green colour. From among these several stalks arise, to the height of a foot, that are upright, knotty, hollow, and almost all naked; the bunch of flowers grow at the top, and consist of five small whitish petals, in the form of a pink, and the calyx in the shape of a funnel, besides which there is a general scaly calyx. They are succeeded

ceeded by seeds, pointed at each end, and contained in a capsula, that was the cup of the flower. It grows wild in *Germany*, and other inland countries, from whence it has been brought into *England*, and planted in gardens, to make edgings, and the sides of borders of flower-gardens; but it is now almost neglected, because they require transplanting every year. It continues a long while in flower, even to the very end of autumn. *Boerhaave* recommends this plant as an astringent vulnerary, and proper to stop internal hæmorrhages; for which purpose the juice is to be drank.

SUBER LATIFOLIUM, PERPETUO VITENS, *the Cork tree*, has a long, thick, hard root, that produces a middle sized tree, with a thick trunk, and a few branches. It has a thick, light, spongy bark, of a yellowish grey colour, that cleaves of itself, and parts from the tree; because it is pushed forward by another bark that grows under it. The leaves are like those of the scarlet oak, but they are larger, longer, green above, and sometimes a little prickly; the catkins and acorns are also like those of the same tree; but they are longer, blunter, and have a more disagreeable taste. The flower-cup is also bigger, and more hairy; it grows in the southern parts of *Europe*. The inhabitants of the places where they grow cleave the trunk of this tree lengthways, to take off the bark more readily, and then they put it over burning coals, laying stones thereon to render it flat; after which they clean it, and send it to other countries; this is what we call cork, that serves for so many different uses. When cork is burnt, and reduced to a fine powder, it is a very good remedy to ease the pains of the piles, mixed with the white of an egg, and the oil of sweet almonds.

TAMARISCUS GERMANICA, *the German Tamarisk tree*, has a root as thick as a man's thigh, covered with a thick bitter bark, from whence proceed several brittle stems, covered with a reddish bark, divided into several branches, and adorned with leaves, like those of common heath, of a sea-green colour, and an astringent taste. The flowers grow in spikes at the extremities of the branches, and consist of five white, purplish, oval petals, or leaves, with an many stamina and

and roundish yellow summits; these are succeeded by small oblong pods, which before were the pistils, and are full of small downy seeds. This shrub grows in *Hungary*, about *Straßburg*, *Landau*, and *Geneva*, by the sides of running waters, and moist stony places. It flowers in *May* and *June*, and does not cease to bear flowers and fruit all the summer. They may be easily propagated in *England*, by laying down the tender shoots in the spring; but they are not of much value here because they have stragling branches.

TAMARISCUS NARBONENSIS, *the French narrow leaved Tamarisk tree*, has a thick woody root, divided into several branches, that sends forth several stems, which together form a bush or shrub, and sometimes a pretty large tree, with a trunk covered with rough grey bark. The leaves are small, long, and round, like those of the cypress tree and common heath; the flowers grow on the tops of the branches in bunches; these are of a whitish purple colour, and consist of five petals or leaves, that are succeeded by pointed fruit, which contain small downy seeds. It grows chiefly in hot countries, but may be propagated here like the former, though it is of no great value. It flowers generally three times a year, namely, spring, summer, and autumn; but the leaves drop off in the winter. The virtues of both these shrubs are much the same, and the root, bark, and leaves, are said to open obstructions of the viscera, and to attenuate gross humours, but they have been long out of use with us.

TANACETUM VULGARE LUTEUM, *common Tansey*, has a long, woody, fibrous, perennial root, which sends forth stalks to the height of two or three feet, which are round, streaked, a little hairy, and pithy. The leaves are large, long, winged, dentated on the edges, and disposed in pairs along a rib, terminating in a single leaf; however, botanists generally reckon all these but one leaf. The flowers grow on the top of the leaves in bunches or umbels, and consist of many florets, divided into several segments, and are of a beautiful yellow. The calyx or flower-cup is scaly, and contains an embryo, that turns to an oblong seed, which is black when ripe. It grows wild on the sides
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of high ways, in fields, and on the edges of ditches; but it is every where planted in gardens, and flowers in *July* and *August*. The leaves have an acrid, bitter, aromatic taste, and are looked upon as stomachic, febrifuge, and sudorific, as well as althelminthic; for both the leaves and seeds have always been accounted good to kill worms. Some give the juice to three or four ounces, in the cachexy, green sickness, and dropfy, in which last case it has succeeded, when other medicines have proved ineffectual. The seed of ransley may be used instead of wormseed; but is not so efficacious.

THALICTRUM LUTEUM, *frut* **RUTA PRATENSIS**, *meadow Rut*, has a yellowish, fibrous, creeping root, with stalks that rise to the height of a man, which are stiff, furrowed, branched, hollow, and generally of a reddish colour. The leaves are large, of a shining green, and indented. The flowers grow on the tops of the branches, and consist of four petals, disposed in the form of a rose, about a cluster of green stamina, or chives, that surround a pistil, which afterwards becomes a fruit, in which the capsula are collected into a small head, that contain each an oblong, yellow, furrowed, small seed of a bitter taste; it has no flower-cup. It grows in meadows, and in moist marshy places, by the sides of brooks, and flowers in the summer. The root purges like rhubarb, for which reason it is called, in *Germany*, the rhubarb of poor people. It tinges the urine with a yellow colour, and is said to have the same qualities in all respects; but the dose must be three times as much. The juice of the leaves and flowers has been given, from one ounce to two, in all internal bleedings.

THLASPI, *Mitbridate Mustard*, has a thick, woody, white root, with round, hairy, stiff, branched stalks, that rise to the height of a foot, which are furnished with leaves without pedicles, that are intire, and as long as the little finger, but broad at the base, and grow narrow by degrees to a point; they are crenated on the edges, and are of a greenish ash-colour, or whitish, with an acrid pungent taste. The flowers are small, white, and disposed like those of sheppard's purse; they are composed of four leaves, placed in the form

form of a cross, with six stamina, that have pointed summits. These are succeeded by round or oval fruit, flattened in the shape of a purse, with a leafy border, slit on the upper side, and divided into two cells by a partition, placed obliquely with regard to the valve, and furnished with smooth, roundish seeds, that have an acrid pungent taste like mustard. It grows in uncultivated places, exposed to the sun, among corn, and on the tops of houses, and walls; it flowers in *May*, and the seed is ripe in *June*.

THLASPI ARVENSE, SILIQUIS LATIS, *Ficula Mithridate Mustard*, with broad pods, has a small, oblique, woody root, from whence arise angular, furrowed, winged stalks, that rise to the height of a foot. The leaves have no pedicels, and are long, broad, smooth, dentated, and of a blackish green, with a smell somewhat like garlick. The flowers grow in spikes at the tops of the stalks, and are composed of four white petals, disposed in the form of a cross, that are succeeded by broad, flattish, smooth pods, containing roundish, flattish, reddish brown seeds, of an acrid, hot, biting taste. It flowers in *May*, and the seed is ripe in *June*; it grows every where in the fields, and continues from the beginning of the spring to the end of autumn.

THLASPI ALLIUM REDOLENS, *Mithridate Mustard smelling like Garlick*, has a single white root, with a few fibres, that sends forth several leaves, of which some are jagged, others are surrounded by small teeth, and others again are without teeth or jaggs; they have generally long pedicles and are nervous and green. From among these arise small stalks with leaves, that embrace each other alternately; the flowers grow at the tops, and are composed of four small white petals, like those of sheppard's purse, and are disposed in the form of a cross. These are succeeded by flat fruit, in the shape of oval purses, which contain roundish flat seeds. All three have the same virtues; but the seeds are only made use of. They are said to promote urine, and to dissolve coagulated blood. The dose is from one scruple to two; but it must not be given to women with child, for fear of causing abortion.

abortion, nor yet to patients of hot constitutions. The seed of the first is an ingredient in mithridate and venice treacle.

THYMUS CAPITATUS DIASCORIDIS, *the true Thyme of the ancients*, has a hard, woody root, furnished with fibres, that sends forth a small shrub to the height of a foot, which is divided into slender, woody, white branches, with leaves placed opposite to each other, that are small, narrow, whitish, and fall off in the winter. The flowers grow in heads at the top of the branches, which are small, purplish, labiated, and consist of a single petal. There are stamina, with slender summits, and the pistil is attended by four embryos, which become so many seeds, enclosed in a husk, which before was the cup of the flower. It is common in *Candia, Greece, Spain, and Sicily*, and grows on mountainous places, exposed to the sun. With us they are cultivated in gardens, and were formerly set in pots and tubs; but of late they have been found to endure the winter.

Besides this there are common broad leaved thyme, narrow leaved thyme, and broad leaved striped thyme, which have all the same virtues, and may be used indifferently in medicine. They are said to strengthen the brain, and to attenuate and rarify clammy humours. They help digestion, and may be of some service in shortness of breath; but they are chiefly used in the kitchen as a pot-herb.

All these plants may be propagated, either by sowing the seeds, or parting the roots; and the proper season for both is at the latter end of *March*.

THYSSELINUM, *Milky Parsley*, has a long, reddish, brown root, full of a milky fluid, that has a hot, sharp, strong, disagreeable taste. It sends forth a stalk to the height of four feet, which is hollow, channelled, and branched. The leaves are ferulaceous, that is resembling that of the ferula, and have a milky juice like the root. On the tops of the branches there are flowers in umbels, consisting of five yellowish white petals, in the form of a rose, with as many capillary stamina with roundish summits. These are succeeded by oval, large, flatish seeds, placed by pairs, and radiated on the back.

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It grows in moist, marshy places, on the sides of ponds and brooks, and of ditches full of water. It flowers in *June* and *July*, and the seeds are ripe in the beginning of *August*. The root has been used in decoction, to promote urine, but it is not very safe, on account of its acridity. *Boerhaave* affirms, that the milk has the same purging quality of scammony, and may be used instead of it.

FILIA, the *Lime*, or *Linden tree*, has a deep spreading root, that sends forth a very large trunk, so full of branches, that it is very proper for shady walks. It is covered with a smooth ash-coloured bark, which is yellowish or whitish within. It is so tough and flexible, that in some places, where better materials are scarce, they make cords and cables therewith. The leaves are broad, roundish, and terminate in a point, and are a little downy on both sides, as well as dentated on the edges; the flowers consist of five whitish petals, which are placed orbicularly, and expand in the form of a rose. There is a long narrow leaf growing to the foot stalk of every cluster of flowers, each of which has a great number of stamina, with yellow summits, and are sustained by a cup cut into five white thick parts. These are succeeded by a pod of the size of a large pea, which are almost round or oval, as well as woody, angular, hairy, and contains one or two roundish blackish seeds, of a sweetish taste. Besides this, there are the small leaved lime tree, the red twigged lime tree, the *Carolina* lime tree, the striped leaved lime tree, and the *American* black lime tree.

The three first sorts are common in *England*, and are cultivated in most nurseries; but the *Carolina* and *American* are not yet very common. They are all easily propagated by layers, which in one year will take good root, and then may be taken off and planted in a nursery, at four feet distant, row from row, and two feet asunder in the rows. The best time to lay them down is about *Michaelmas*, when the leaves begin to fall, that they may take root before the frost comes on; it is likewise much the best to remove them in autumn. They may remain here five years, and the large side shoots must be pruned off, to cause them to advance in height, but

but the small twigs must not be cut off from the stems, because they are necessary to retain the sap for the augmentation of their trunks. If the soil be a fat loam, they will in that time be large enough to plant where they are to remain. The timber of the lime tree is used by carvers, because it is a light soft wood; as also by architects for framing models of their buildings; not to mention the turners, who make bowls and dishes therewith.

With regard to their medicinal virtues, the flowers are said to be good in all disorders of the head, and may be drank like tea with sugar. Some make a conserve of them for the same purpose, and the dose is from half an ounce to an ounce. Some affirm them to be good in the stone and gravel, and to dissolve coagulated blood. The berries are astringent, and good against all sorts of hæmorrhages and loosenesses; the dose is a dram in powder.

TINCTORIUS FLOS, or LUTEOLA, Dyer's Weed, or *yellow Weed*, by some called *Weld* or *Wauld*, has a root generally as thick as a man's little finger, which is single, woody, white, and has a very few fibres. The leaves are oblong, narrow, smooth, and not dentated, tho' sometimes they are a little curled. Among these there rise stalks to the height of three feet, which are round, hard, smooth, greenish, branched, and furnished with leaves that are less than those below; and on the tops there are flowers, composed of three unequal petals, of a beautiful yellowish green colour. These are succeeded by almost round capsula, terminated by three points, which contain several roundish, small, blackish seeds. It is very common in *England*, and grows upon dry banks, and on the tops of walls and buildings, almost every where. It is of great use among the dyers, and will grow on the poorest sort of land, provided it be dry. The seeds should be sown in the middle of *August*, soon after they are ripe; they will come up the first moist weather, and will grow very strong the same autumn, provided they are sown by themselves. When they are pretty strong, they should be hewed like turneps, to destroy the weeds, and to thin them where too thick. The seed must not be too ripe when gathered,
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for then it will fall out; nor yet must the stalk be under ripe, for then it will be good for nothing. It must be bound in handfuls, and then set to dry like flax, taking care not to shake out the seed; which is usually sold for ten shillings a bushel, and a gallon will sow an acre. It is used for dying bright, yellow, and lemon colours. A great deal of this is sown in *Kent*, especially about *Canterbury*; and they cultivate it in *Languedoc* and *Normandy*, in *France*, where they boil it in water with alum, and then it will colour white wool yellow, and blue stuffs green. It is said to be an opening medicine, and to be good against the jaundice and cachexy; but it is seldom or never used with us.

TITHYMALUS, *Spurge*, is of three kinds, namely, *German Spurge*, *Garden Spurge*, and *narrow leaved Wood Spurge*.

German SPURGE has a thick, white, woody, creeping root, which sends forth several stalks, to the height of two or three feet, about as thick as a man's little finger; these are reddish, branched, and beset with leaves alternately placed, and these are smooth, oblong, green, and perish in the winter with the stalks. The flowers grow on the tops of the branches, and are disposed in umbels. They consist of one single leaf or petal, in the shape of a slipper, whose pointal afterward becomes a tricapsular fruit, divided into three cells, each of which contains a roundish seed full of a white substance. It grows upon the sandy banks of rivers, and other marshy places; it is common in *Germany*, on the banks of the *Rhine*, from whence it has its name. It is sometimes in gardens, and flowers in *May* and *June*. It is cultivated full of an acrid milky juice, like other plants of this kind.

Garden SPURGE has a single root, with a few capillary fibres, and sends forth a stalk to the height of two feet, as thick as a man's thumb, which is round, solid, reddish, branched at the top, and furnished with many leaves three inches long, in the shape of those of willow; they are of a blueish-green, smooth, and soft to the touch. The flowers grow on the tops of the branches, and are each composed of four thick petals, with several slender stamina, and roundish summits; they

they are encompassed with two pointed yellowish leaves, which seem to be in the room of a cup. They are succeeded by fruits, that are larger than those of the other plants of this kind, which have three corners, divided into three cells, with a seed in each as big as a peppercorn. The whole plant is full of a milky juice, and is almost every where cultivated in gardens. It flowers in *July*, and the seed is ripe in *August* and *September*. Beggars make use of this milk very frequently to disfigure the skin, in order to move compassion. If the leaves or fruit of this plant are thrown into ponds, it makes the fish rise to the surface of the water, where they lie as if they were dead; but they may be recovered speedily by changing the water.

TORMENTILLA SYLVESTRIS, *wild Tormentil, or Septfoil*, has a root about as thick as a man's finger, which is rough, unequal, sometimes straight, and sometimes crooked, of a dark colour without, and reddish within; it is a kind of a tubercle, and is furnished with a few fibres. The stalks are slender, weak, hairy, reddish, and about a foot long; they lie on the ground, and are surrounded with leaves by intervals, like those of six leaved grass; they are hairy, and there are commonly seven leaves at the top of the foot stalk. The flowers consist of four yellow petals, placed like a rose, supported by a calyx or cup, in the form of a basin, divided into eight parts, of which four are large, and four are small; they are placed alternately, with sixteen stamina in the middle. These are succeeded by a globular fruit, which contains many seeds that are small and oblong. It grows almost every where, in dry pastures and commons, in most parts of *England*; it flowers in *May*, *June*, and *July*, and the root is principally used in medicine; but the Tormentil of the *Alps* is much more valuable, on account of its superior virtues. The root has a styptic very bitter taste, and is accounted good to stop loosenesses, hemorrhages, and the like. The dose in decoction is from half an ounce to an ounce, and in powder from half a dram to a dram.

TRIFOLIUM PRATENSE PURPUREUM, *common meadow Trefoil, with a purple flower*, by many called

called *Honey-suckles*, has a root as thick as a man's little finger, which is long, round, woody, creeping, and fibrous. The stalks rise to the height of a foot, or a foot and a half, and are slender, channeled, and sometimes a little hairy. The leaves are partly round, and partly oblong, and there are three together on the same pedicle, marked on the middle with a spot, in the shape of a heart, which is sometimes white, and sometimes dark. The flowers grow on the tops of the stalks, and have some resemblance to the papilionaceous kind; are disposed in a head, or short thick spike, of a purplish colour, and have a juice at the bottom, as sweet as honey. They are succeeded by small round capsules, each of which is inclosed in a calyx, and terminated by a long pedicle, containing a seed, in the shape of a kidney. It grows almost every where in meadows and pasture grounds, flowering in *April, May, and June*. The flowers are greatly sought after by bees, and the whole herb is excellent for feeding cattle.

TRIFOLIUM ARVENSE HUMILE SPICA-
TUM, *Here's-foot Trefoil,* is the lagopus of the shops,
and has a slender, woody, fibrous, crooked, white,
annual root. It has several stalks, about six inches
high, which are branched, strait, and covered with a
whitish down. Three leaves are placed together upon
one pedicle, which are smaller than common trefoil,
and are downy and whitish, especially upon the back.
The flowers are small, whitish, papilionaceous, and
fixed on hairy soft spikes, which resemble the feet of
a hare; the colour is ash, inclining to purple. These
are succeeded by capsulae, inclosed in a calyx, each of
which contain a reddish seed like a small kidney. It
grows every where in fields among corn, and flowers
towards the latter end of summer, continuing till Oc-
tober. Most physicians affirm it is good to stop loose-
nesses of every kind, if the decoction be used as com-
mon drink. If the seed happens to be mixed with
wheat, it turns the bread of a reddish colour, which
had like to have caused an insurrection at *Paris*; for
the people affirmed the bakers mixed blood with their
flower.

TRIFOLIUM BITUMINOSUM, *Trefoil, Smelling of Bitumen*, has a hard, woody, fibrous root, which sends forth a sort of a shrub, about two feet high, and is divided into several stiff channelled branches, which are sometimes whitish, and sometimes blackish. The leaves grow by three's on the same pedicle, which, when they first appear, are round, but grow longer afterwards, and terminate in a sharp point; they are whitish, downy, clammy to the touch, and have the smell of bitumen. The flowers grow on the tops of the stems and branches, are disposed like an oblong head, and are papilionaceous, and of a violet purple colour; they are sustained by an oblong, channelled, hairy calyx. These are succeeded by a capsula inclosed by the calyx, which contains a rough, pointed, blackish seed, of the same smell with the rest of the plant. It grows in *Candia, Sicily, Languedoc*, and the southern parts of *France*; on stony hills near the sea, and is planted here in some gardens for the sake of variety, and kept in pots. It flowers in *June, July, and August*, and will stand the winter, if it is not too severe. The juice of this plant has been counted a secret against a cancer, and has been given from one spoonful to two, for that purpose.

TRIFOLIUM HÆMORRHOIDALE, *pile Trefoil*, has a long, hard, woody root, with several stalks, which rise to the height of two or three feet, are slender, round, hairy, woody, branched, and make a kind of a shrub, furnished with downy, whitish, and roundish leaves, which grow by three's, on the same pedicle, and have two appendages at the base. The flowers grow at the extremities of the stems and branches, and are papilionaceous, whitish, and supported by a hairy calyx. These are succeeded by short thickish pods, of a reddish brown colour, that contain a round small seed, yellowish within. It grows in the southern parts of *France*, and flowers in the summer. It has been counted an excellent remedy for the piles; and some affirm, a dram or two of these leaves, given in powder, has been of great service in that disorder.

Bird's foot Trefoil is the *Trifolium Corniculatum* of the shops, and has a woody, long, black root, divided into

into several branches, and furnished with fibres. The stalks are slender, branched, and lie upon the earth; and the leaves are placed as in other trefoils, only there are two small flat leaves that grow underneath them, which are sometimes smooth, and sometimes a little hairy. The flowers are papilionaceous, grow in umbels, and are sometimes yellow, and sometimes greenish, like those of broom; the calyx is dentated, and in the shape of a horn; the flowers are succeeded by capsule or pods, in the form of a cylinder, which contain several roundish seeds, in the shape of kidneys. It grows almost every where, and flowers in summer; it is exceeding good for cattle, but is of little use in medicine.

TULIPA, *Tulip*, is a lily flower, generally composed of six petals or leaves, in the shape of a pitcher: the pointal, which arises from the middle of the flower, is surrounded with a stamina, which afterwards becomes an oblong fruit, that opens into three parts, and is divided into three cells, full of plain seeds, which rest one upon another, in a double row. The root is coated, bulbous, and there are fibres on the lower part. There are several kinds of tulips, which there is no occasion to enumerate, because they may all be seen in one good garden; but the best have a tall strong stem. The flower consists of six leaves, three within and three without, and the former should be longer than the latter. Their bottoms should be proportioned to the top, and their upper parts should be rounded off, and not terminate in a point. These leaves, when open, should neither turn inward nor bend outward, but rather stand erect; and the flower should be of a middling size, neither too large nor too small; the stripes should be small and regular, arising from the bottom of the flower, and the chives should not be yellow, but of a brown colour. They generally divide tulips into three classes, namely, the early flowers, the middling flowers, and the late flowers; but they are best divided into early and late, of which the last are the best.

TUSSILAGO, *Colt's-foot*, has a long, slender, whitish, tender root, with stalks that rise to the height of a

foot, which are hollow within, downy, reddish, and covered with leaves without pedicels. These are long pointed, placed alternately, and at the top of the stalk there is a beautiful, round, radiated flower, resembling that of dandelion, with capillary stamina, that have cylindrick summits. These are succeeded by several oblong, flattish, downy seeds. After the flowers, the other leaves appear, which are very large, a little angular, almost round, green above, and whitish and downy below. It grows in moist places, and on the borders of rivers, brooks, ponds, and ditches. It flowers about the end of *February* and beginning of *March*. Colt's-foot is an excellent medicine to abate the sharpness of the humours, to cleanse ulcers of the breast, and to facilitate expectoration. There are a great many that are troubled with the asthma, who cut the leaves small, and mix it with tobacco for smoking; and affirm they find great benefit thereby. Both the flowers and leaves are used in pectoral decoctions; and Dr. *Hillary*, physician to the king of *Prussia*, cured a great many consumptive children, by feeding them with colt's-foot leaves, boiled and buttered.

VALERIANA HORTENSIS, *Garden Valerian*, has a wrinkled root, of the thickness of a man's thumb, placed near the surface of the ground, and furnished with thick fibres, of a yellowish or brown colour, that cross each other. The stalks are about three feet high, and are slender, round, smooth, hollow, branched, and furnished with leaves, placed opposite to each other by pairs. Some are smooth and entire, while others are cut deeply on each side, and generally terminate in a roundish point. The flowers grow in umbels on the tops of the stalks and branches, and are of a purplish white colour, with a sweet smell, not unlike that of *Jessamine*. Each of these is a sort of tube, cut into five parts, with a few stamina that have roundish summits. They are succeeded by flattish, oblong, tufted seeds. It is cultivated in gardens, and propagated by parting the roots, either in the spring or autumn; they should be planted on beds of fresh, dry earth, about eight or ten inches asunder, and should be watered till they have taken root. The wild sort is now universally preferred

preferred for medicinal uses, and therefore no more need be said of this.

VALERIANA SYLVESTRIS MAJOR, *Great wild Valerian*, has a fibrous, whitish, streaked root, with a very strong smell when it is dry, and an aromatick taste; the stalks rise to the height of a man, and are striat, slender, hollow, channeled, knotty, and a little hairy. The leaves resemble those of garden Valerian, but are more divided, greener, and dentated on the edges; they are a little hairy or downy underneath, and have several large veins. The flowers grow on the tops of the stalks and branches in umbels, and are of a purplish white colour, like those of the former; the seeds are tufted or downy, for which reason they are carried about with the wind. It generally grows on dry chalky land, and shady places, in divers parts of *England*. It flowers in *May* and *June*, and the seed is ripe in *July*. The root is bitter, styptick, and has a disagreeable aromatick smell; it is much used up against the epilepsy, and is sudorifick as well as hysserick; it is accounted good for the asthma, and all kinds of convulsive disorders. It may be taken in decoction, from two drams to half an ounce, and, in substance, from one dram to two. It should be taken up in the spring, before the branches appear, and dried in the shade. Several physicians affirm, they have cured a great number of epileptick patients with the powder of the root of wild Valerian, given to a dram in a sudorifick decoction, and continued for some time.

VALERIANELLA, *Corn Salad, or Lambs Lettuce*, has a slender, fibrous, or white annual root, and a stalk about six inches high, which is weak, round, crooked, channeled, hollowed, knotted, branched, and commonly lies upon the ground. It is generally subdivided into two at each knot, and these last into several branches. The leaves are oblong, pretty thick, soft, tender, and placed by pairs, opposite to each other; the colour is a pale green; some of them are entire, and others crenated, without pedicles. The flowers grow on the tops of the branches, are small, of a purplish white colour, and placed in umbels;

they

they each consist of one leaf or petal, cut into five parts, and are succeeded by roundish, flattish, wrinkled, whitish seeds, which fall off before they come to maturity. It grows almost every where, among corn, and is cultivated in gardens, where it is sown in *September* for winter use. It is usually mixed with fallads, and will continue till *April*. It is said to have the virtue of lettuce, and to be good in the rheumatism, scurvy, and gout; but it is now never used for these purposes. Young lambs are said to be fond of it.

VERATRUM, *White Hellebore*, is of two sorts, one of which has a greenish flower, and the other a dark red flower. The former of these has been mentioned before, in the first part; but as nothing was said of the cultivation, I shall take notice of it here, especially as it is accounted a pretty ornament for gardens. They should be set on the open borders of a pleasure garden, and from each head of the root, a flower stem will be produced, about three feet high, with a spike of flowers about a foot long at the top; the red flowers are generally preferred, on account of their colour. They may be propagated by parting the roots, either in autumn or the middle of *March*, just before they begin to shoot; and should be planted in a light, rich, fresh soil, in which they will thrive exceeding well. They should not be removed above once in three or four years, by which time they will be very strong, and afford many heads to be taken off.

VERBASCUM, *Great white Mullein*, has a single, oblong, thickish, woody, white root, with a few fibres; and the stalk, which rises to the height of four or five feet, is thick, round, hard, woody, and crooked, with a sort of wool or cotton; the leaves are long, broad, woody, white on both sides, partly lying upon the ground, and partly fixed to the stalk alternately, with appendages, which seem to render the stalk winged. The flower consists of one leaf, in a circular form, which is cut into five parts, and joined to each other by a tuft; it is yellow, and surrounds the greatest part of the tops of the stalk and branches. The flowers are succeeded by oval shells, terminating in a point, divided into two cells, which contain a great number of small,

small, angular, blackish seeds. It grows in sandy places, by the side of highways, and sometimes on walls; it flowers in *June, July and August*.

VERBASCUM FÆMINA FLORE LUTEO MAGNO, *Female Mullein*, with a large yellow flower, has a long, thick, woody, single, white root, like the former, and the stalk, which rises to the height of four or five feet, is thick, round, hard, downy, and a little branched. The leaves are round, long, soft, downy, and white; and the flowers are like the former, having five stamina in the middle, with purple summits. These are succeeded by almost round capsula, pointed at the end, and divided into two cells, which contain several angular brownish seeds. This plant grows in the same places as the former, and flowers the second year after it is come up towards the end of summer, and in *August*. They both may be cultivated in gardens, by sowing the seeds in *August*, on a bed of light earth, and in an open situation; but it is seldom done unless in botanick gardens for variety. They both have the same virtues, and the leaves and flowers are in use. The decoction has been given in disorders of the throat, in violent coughs, in the bloody flux, the gripes, and a tenesmus. The flowers are said to be pectoral, proper to abate the acrimony of the humours, to cure itching of the skin, and the outward and inward piles.

VERONICA MAS, *common male Speedwell*, or *Fuellin*, has a slender, fibrous, spreading root, which sends forth several slender, long, round, knotted, hairy stalks, generally lying on the surface of the ground. The leaves grow by pairs opposite to each other, and are like those of a plumb-tree; they are downy, dentated on the edges, and have a bitter acrid taste. The flowers are disposed in spikes, like those of germander, and are small and blueish, and sometimes white, with two stamina of the same colour, with oblong summits. The flower consists of one leaf, which is divided into four parts, and is succeeded by fruit in the shape of a heart, placed in two cells, which contain several round blackish seeds. It grows wild in the woods, and other shady places in divers parts of *England*.

England. There are some other species of this plant; but this is the only one used in medicine, and is said to have so many virtues, that an entire treatise would scarce contain them; besides which, some call it the *European tea*. In general, it is sudorifick, vulnerary, detergent, diuretick, and proper to cleanse the lungs. Hence it is good in a dry cough, the asthma, ulcers of the lungs, and spitting of blood. It opens obstructions of the bowels, promotes the circulation of the blood and humours, and is excellent in the gravel. It is best used in the manner of tea, and is very good in sleepy disorders.

VIOLA MARTIA PURPUREA FLORE SIMPLICE ODORO, *common purple Violet, with a sweet scented flower,* has a fibrous, thick, or tufted root, that sends forth many almost round leaves, as large as mallows, dentated on the edges, green, and having long pedicles. From among these there arise slender pedicles, which have each a small flower, of a purplish blue colour, with a very agreeable smell. It is composed of five small leaves, with as many stamina, that have blunt summits, and a kind of a spur; the calyx or flower-cup is divided at the base into five parts. When the flower is gone, there remains a capsula, or oval shell, which, when ripe, opens into three parts, in which are almost round seeds, connected to the sides of the shell, which are less than those of coriander, and of a whitish colour. It grows in shady places, in ditches, and the sides of hedges; as well as against walls, where they readily multiply with their long creeping filaments, which take root here and there. They flower in *March*, and do not lose their leaves, nor the verdure, during the winter. Besides this, there are no less than twenty eight sorts, and about eight of them serve to make agreeable varieties in gardens and wildernesses, by placing them under hedges, and other shady places. They may be easily propagated, by parting the roots; the best time for which is about *Michaelmas*. The leaves and flowers are used in medicine, and sometimes the roots, by infusion, three ounces of which will purge upwards and downwards. The flowers are a little purgative, and we are assured,

assured, that a dram of their powder, taken in water-gruel, is a good purge; but they are generally used to make a syrup of, which, when well managed, is of a very fine colour.

VISCUM, *Mistletoe*, has a green root, which is a little woody in the middle, and sends forth a shrub about two feet high. The stalks, which are sometimes as thick as one's little finger, are woody, heavy, compact, knotted, and of a brownish-green. There are a great number of flexible woody branches. The leaves are placed by pairs opposite to each other, and are oblong, thick, fleshy, hard, and pretty like those of the great box, but longer, and roundish at the end. The flower consists of one leaf, in the form of a basin, and is generally divided into four parts, and beset with tubercles or warts. The ovary of the female flowers is placed in a remote part of the plant from the male flowers, and consist of four shorter leaves; these turn to a round berry, full of a clammy substance, in which is a plain seed, in the shape of a heart. It grows almost on all kinds of trees, according to some authors, and is always produced from seeds, which will not grow in the ground like other plants. It is supposed that the mistletoe-bird or thrush, which feeds upon the berries of this plant in winter, when they are ripe, often carries the seeds from tree to tree; for the clammy part of the berry, which immediately surrounds the seed, sometimes sticks fast to the outer part of the bill of the bird, which, to disengage himself from, he strikes it against the branches of a neighbouring tree; and by that means leaves the seeds, sticking on the bark, which will grow the succeeding winter. It may be propagated by art in the same manner. The trees it is found commonly upon, are the apple and ash; and it is sometimes, though but seldom, found on the oak; which perhaps is the reason why that is cried up more than others; but without any sufficient reason, Mistletoe is looked upon as a great anti-epileptick, and the dose of it in powder is from one dram to two. *Simon Pauli* cries it up against the pleurisy, and orders one dram of the powder, in four ounces of barley-water. The berries purge upwards and downwards,

with great violence, and therefore are not proper to be given inwardly.

VITIS, the *Vine*, has a long woody root, which sends forth a climbing tree, that has claspers at the joints, by which it fastens itself to whatever plant stands near it. The leaves are large, broad, and almost round, green, shining, cut, a little rough to the touch, and of an astringent taste. The flowers are small, and are each composed of five petals or leaves, disposed in a circular order. They are of a yellowish colour, with as many upright stamina. When the flowers are fallen, they are succeeded by round or oval berries, lying close to each other in clusters, which are green at first, and, as they ripen, become white, red, or black; they are also full of a pleasant juice. This tree is cultivated in most hot and temperate countries, and rises to a great height in a short time, if it be left to itself, and not cut. In some countries it will rise to the top of the highest trees, and have a stem of a prodigious size. It flowers in the summer, and the grapes are ripe in autumn.

All sorts of vines are propagated either from layers or cuttings, the former of which is greatly practised in *England*, but the latter is preferred by Mr. *Millar*; and he lays down excellent rules for their cultivation, which we have not room to take notice of here.

The buds of the vine, as well as the leaves, are astringent, and were used by the ancients to cure loosenesses; at present, there are some in *France* that gave the powder of the green leaves, dried in the shade, to a dram, for the same purposes. The use of the grapes is universally known, they being proper either for eating, or making of wine. When they are green, they produce the liquor which is properly called verjuice; and, in this state, it is a little astringent, serves to abate the heat of the stomach, and to stop a bilious looseness, as well as to recover the appetite. It is made use of in *France* in the same manner as our common verjuice made with crabs. Of the juice of ripe grapes they make a sapa or rob, by evaporating it over the fire, till a third part remains. This is a little astringent and styptic, which they make use of in *France*

to prepare quinces with; and then it is said to be excellent to stop loosenesses, and to strengthen the stomach. As for wines, they vary greatly, with regard to their colour, smell, taste, and consistence; all which are different, according to the different kinds of grapes of which the wine is made. Good generous wine, of any sort, is an excellent cordial, if properly used, and of late has been found to be of great service in all slow nervous fevers; for they will recover the patient, when other things fail. However, there are some wines that are too astringent for common use, and consequently produce costiveness; for which reason they must be unwholesome, unless drank in small quantities; however, they are proper enough for those whose stomachs are relaxed. Meagre acid wines agree with those of a bilious constitution, to restrain the effervescence of the blood, but with none else. Strong spirituous wines are most proper to raise the spirits, and to restore the exhausted strength, especially when they are not drank too commonly.

VITIS IDÆA, FOLII OBLONGIS CRENATIS, *common black Wortle, or Bilberry,* has a slender, woody, hard root, often creeping under the ground, which sends forth a small shrub, about a foot in height, with several slender branches, that are angular, flexible, and difficult to break, as well as covered with a green bark. The leaves are oblong, and about the size of those of box, but not so thick; they are green, smooth, slightly dentated on the edges, and have an astringent taste. The flowers consist of a single leaf, in the shape of a pitcher, and are connected to short pedicles, of a reddish white. There is a small lasting flower-cup, in which is the germen, attended by eight stamina, with forked summits. The germen afterwards becomes a soft, globular, umbilicated berry, of the size of juniper-berries, and of a deep blue, or blackish colour. It grows very common on large wild heaths, in many parts of *England*; but it is never cultivated in gardens, because it will not thrive therein. In those parts where they are common, the poor people gather them, and bring them to markets to sell, or cry them about the streets. It is common to eat them with milk,

or cream. Some take the juice of these berries, and boil them to the consistence of a rob, with sugar, which is said to be good against a common looseness, and to temperate the effervescence of the bile. Several vintners in *France* make use of these berries, to colour their white wines red, as well as to increase the quantity thereof; and it were to be wished, that nothing worse was any where used to adulterate this liquor. Some likewise make use of the juice to colour linen, as well as paper, blue.

ULMARIA, *Meadow-Sweet*, has a pretty thick root, as long as one's finger, which is blackish without, of a reddish brown within, and has a few reddish fibres; it sends forth a stalk, to the height of three feet, which is strait, angular, smooth, reddish, firm, hollow, and branched. The leaves are placed alternately, and are composed of several other oblong leaves, not much unlike those of drop-wort. They are dentated on the edges, wrinkled, and green above, but whitish below. The flowers are small, and grow in bunches on the tops of the stalks and branches; they each consist of several petals or leaves, of a whitish colour, in the form of a rose, and have an agreeable smell. These are succeeded by a fruit, composed of many little membranaceous crooked husks, gathered into a sort of a head, each of which contains a small seed. It grows wild in moist meadows in most parts of *England*, and the flowers in the middle of *June* make a fine appearance among the grass. The seeds are ripe in autumn. This plant is said to be sudorific, cordial, and vulnerary, and some recommend its decoction in malignant fevers; others greatly praise it against fluxes, and internal hurts, but it is not to be depended upon on these accounts. A dram of the extract of the root is sudorific, if it be taken for two or three days together. The tender leaves and flowers of this plant, put into wine, mead, or beer, give them an agreeable taste and smell, which some are very fond of.

ULMUS, *the Elm tree*, has a thick, hard, woody root, which spreads greatly in the ground, and sends forth a large branched tree, with a thick trunk, covered with a chapped bark, which is rough, and of a reddish

reddish ash colour without, but whitish within. The wood is strong, hard, inclining to yellow, with a reddish cast, and the leaves are broad, wrinkled, veinous, oblong, dentated on the edges, terminating in a point, of a pretty deep green above, with short pedicles, and crossed longways by a nerve, which does not appear so much on one side as the other. The flower, which appears before the leaves at the top of the branches, consists of a single leaf, shaped like a bell, furnished with several dark coloured stamina, and from the bottom arises the pointal, which afterwards turns to a membranaceous and leafy fruit, almost in the shape of a heart. In the middle of which is placed a seed-vessel, in the shape of a pear, containing a single seed of the same shape. This tree grows in plenty all over *England*, and is propagated by seeds, and suckers that rise from the roots of old trees in such plenty, as hardly to be rooted out, particularly in hedge-rows, which, when left undisturbed, will send forth young plants every year; from whence the people who supply the nurserymen gather them. It flowers in *March* and *April*, and the seeds are ripe in *May*.

Besides the common Elm, there are the witch hazel, or broad leaved Elm; the small leaved or *English* Elm, the smooth leaved or witch Elm, the *Dutch* Elm, the *English* Elm with beautiful striped leaves, the yellow leaved Elm, the *Dutch* Elm with striped leaves, the smooth narrow leaved Elm, the white barked Elm, and the *French* Elm. The three first, as well as the former Elm, are common in *England*, and so is the fourth, which is as hardy as the former. Those sorts with striped leaves are preserved by the curious, who collect variegated plants. The smooth narrow leaved Elm is common in some parts of *Hertfordshire*, and *Cambridgeshire*, and is a very handsome upright tree, which retains its leaves late in the autumn. They may be all propagated by layers or suckers taken from the roots of old trees; but the method by layers is best, because they come on faster than the others. The best soil for such a nursery is a fresh hazel loam, neither too light nor too dry, nor yet too moist and heavy.

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With regard to the medicinal virtues, we are assured in the *German Ephemerides* of 1727, that several persons, afflicted with the dropsy ascites, have been cured by the decoction of Elm-bark, used as common drink for five or six weeks. There are sometimes on Elm leaves a sort of bladders, that swell to the bigness of a man's fist, which contain a liquor, in which are greenish insects. This must be strained thro' a cloth, and then several affirm it will be good for all recent wounds and bruises. Ray tells us, that the decoction of Elm-bark, reduced to the consistence of a syrup, and a third part of brandy added, is good to ease the hypogout, if used as a liniment.

UMBILICUS VENERIS, *Navel-wort*, has a tuberose, fleshy, white root, furnished below with small fibres, which send forth round thick leaves, full of juice, that are tender, hollowed like a basin, and fixed to long pedicles, of a sea-green colour; from the middle of these there arises a slender stalk, about half a foot high, which is divided into several branches, covered with small flowers, consisting of a single leaf, expanded in a circular order, and cut into several segments; the colour is white, or a little inclining to purple, with ten stamina, and strait summits. These are succeeded by a fruit, composed of four hollow, umbilicated capsula, somewhat resembling a basket, in the middle of which is contained one seed, that is almost flat. This plant grows naturally among rocks, and on old walls, in stony hot countries, and flowers in *April* and *May*, at which time the leaves decay. It begins to appear towards the end of autumn, and keeps its leaves all the winter.

UMBILICUS VENERIS ALTER, *creeping Navel-wort*, has a long creeping root; but the leaves are much the same as those of the former, only they are greater, thicker, open towards the pedicle, crenated on the edges, and from among them there arises a round, firm, reddish stalk, furnished with smaller leaves, divided into several branches, loaded with yellow flowers, in the form of a spike. They each consist of a single leaf, cut into five parts, supported by a long greenish calyx; these are succeeded by five oblong,

oblong, pointed, greenish capsula, full of very small reddish seeds. This plant grows wild in *Portugal*, and is cultivated in the gardens of the curious. It flowers in *June*, and the leaves are green all the winter, but then entirely disappear in *May*. The seeds of the former should be sown in autumn, soon after they are ripe, at which time they will come up very well; but if they are sowed in the spring, they seldom succeed. The leaves are said to be very good in external inflammations, and they may be substituted in the room of house-leek. Some bruise this herb between two stones, and apply it to ease the pain of the piles; but there are more certain remedies for these purposes.

UNEDO, *five* ARBUTUS, the *Strawberry tree*, has a pretty thick, woody root, from whence proceeds a shrub, or small tree, whose trunk is covered with a rough chapped bark, and there are many reddish branches towards the top. The leaves are oblong, somewhat broad, and almost like those of the laurel tree, for they are thick, smooth, always green, and finely crenated on the edges. The flowers consist of a single leaf, cut into five parts, which are white, beautiful, disposed in bunches, and have an agreeable smell, with ten capillary stamina. These are succeeded by fruits, that have some resemblance to strawberries; but they are larger, of an orbicular shape, with the flesh yellow before they are ripe, and of a fine red when at maturity; it is divided into five cells, which contain several small, oblong, bony seeds. This shrub is very common in *Italy*, *Spain*, and the southern parts of *France*; it flowers in *June* and *July*, and the fruit does not grow ripe in less than a year. Blackbirds and thrushes are very fond of these strawberries, as well as women and children. There are some of these shrubs planted in *England*, and it is very common in *Ireland*, where the fruit is sold and eaten. With us it has an austere sower taste, which perhaps may be owing to the coldness of the climate, and therefore only the branches are brought to the markets, with bunches of flowers thereon, to be made up into nosegays. They may be propagated by sowing the seeds, which should
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be preserved in dry sand till *March*, at which time they may be sown on a moderate hot-bed, covering them with about a quarter of an inch of light earth, screening them from frost, or great rains. About the beginning of *May* the plants will appear, and then they must be weeded, watered frequently, and shaded in hot weather. In autumn they will be about five or six inches high. The bed must be hooped all over against winter, and should be covered with mats and straw, to keep out the frost. About the middle of *April*, they may be transplanted into small pots, which should be plunged into another moderate hot-bed, to encourage their taking root, and they should be shaded from the sun in the middle of the day. When they are between three and four feet high, they may be shaken out of the pots into the open ground, where they are to remain; this is best done in *September*, when the blossoms are beginning to appear, and then, if they be kept moist, they will take root very soon, but in *November* the roots should be well covered, to keep out the frost.

URTICA, the Common Nettle, has a slender, fibrous, creeping root, of a yellowish colour, with stalks that rise to the height of three feet, which are square, furrowed, stiff, covered with a stinging hair, hollow, branched, and furnished with leaves, placed opposite to each other by pairs; these are oblong, broad, pointed, dentated on the edges, and full of small stinging prickles. The flowers grow on the tops of the stalks and branches, under the leaves, and are each composed of several stamina placed in a calyx, with four leaves of the colour of grass; but they leave no seeds behind them; for this reason, they are distinguished into male and female. The male does not flower at all, but form pointed capsula, that sting when they are touched, and each of these contain an oval, flattish, shining seed. The female bears nothing but flowers without any fruit, according to the vulgar distinction; for the botanists call those male flowers that produce no seeds, and those female flowers that are succeeded by seeds. This plant grows almost every where, in great plenty; it flowers in *June*, and the seed is ripe in *August*. The

The leaves decay every winter, but the roots continue, and send forth fresh leaves in the spring.

URTICA MINOR, *the lesser stinging Nettle*, has a single, pretty large, white root, furnished with small fibres: the stalks are from half a foot to a foot in height, and are pretty thick, square, hard, furrowed, branched, and stinging, but not so strait as the former; the leaves are placed opposite to each other by pairs, and are more short and blunt than those of the common nettle; they are also deeply dentated on the edge, and sting greatly when touched. The flowers consist of stamina, disposed into small bunches, in the form of a cross, and of a grass green colour. Some of these are male, and others female, as in the former. These grow commonly by the sides of houses, and among the ruins of old buildings; both root and branches perish every year, and they are renewed by the seeds in the spring.

URTICA ROMANA, *Roman Nettle*, has a fibrous, yellowish, annual root, that sends forth a stalk to the height of four or five feet, which is round, branched, and furnished with stiff, stinging prickles. The leaves are placed opposite to each other, and are broad, pointed, deeply dentated on the edges, and covered with a rough stinging, shining hair. The flowers are like those of the former, and are succeeded by small globes of the size of a pea, all rough with prickles, and composed of several capsules, that open into two parts, and have each an oval, pointed, flattish, smooth, slippery seed. It grows as well in cold as hot countries, in hedges, meadows, and among coppices. It is not so common as the two former, for which reason there are some that sow the seed in gardens; it flowers in summer, and the seed is ripe in *July* and *August*. Some call this the pill-bearing stinging nettle, with seeds like flax. These may be sown at the latter end of *March*, upon a bed of light rich earth; and when the plants are come up, they should be removed into beds on the borders of the pleasure garden, among other plants; because it is common for persons to gather sprigs of several sorts to smell to, and consequently this among the rest, and this is designed to sting them
for

for the sake of mirth. The juice of nettles is recommended to stop spitting of blood, and other hæmorrhages, and the dose is from two ounces to four. Some would have the infusion of the leaves of nettles, made like tea, to be given in the gout, the rheumatism, the stone, and gravel. It is common in many places to make pottage with the young shoots of nettles in the spring, to cleanse the blood. The roots of nettles made into a decoction, are said to be a good remedy against the jaundice, and to promote expectoration in an old cough, as well as in the asthma and pleurisy.

VULNERARIA RUSTICA, *Kidney-Vetch*, or *Ladies Finger*, has a single, long, strait, blackish root, with stalks that arise to the height of a foot, which are slender, round, downy, a little reddish, and lie upon the ground. The leaves are placed by pairs along one side, and are terminated with a single leaf like those of Goats Rue, but a little softer; they are hairy underneath, inclining to white, but of a yellowish green above, with a sweetish acrid taste. Those, which sustain the flowers on the tops of the branches, are broader than the rest. The flowers grow on the tops of the branches, and are yellow, papilionaceous, and have each a calyx like a tube, which are succeeded by short pods filled with roundish seeds, that are contained in a membranous bladder, and was before the cup of the flower. It grows in mountainous, dry, sandy places, or on chalky grounds in divers parts of *England*. It flowers in *May* and *June*, and the seed is ripe in *July* and *August*. It has been accounted good for healing fresh wounds, but it is now out of use.

UVULARIA MAJOR, *Throat-wort*, has a thick, long, branched, white root, that sends forth several branches, to the height of three feet, which are sometimes as thick as a man's little finger, and are angular, furrowed, hollow, reddish, and hairy. The leaves are disposed alternately along the branches, and are like those of the common nettle, but they are more pointed, and those below have long pedicles.

The

The flowers are made like a bell, cut on their edges into five parts, and are of a blue or violet-colour; but sometimes they are white, hairy within, and supported by a small calyx, cut likewise into five parts, and they have five short capillary stamina in the middle, with flat summits. The calyx is succeeded by a membranous, roundish, angular fruit, which is divided into several cells, with holes on their sides, and contain small, shining, reddish seeds. This plant grows frequently in woods, hedges, meadows, and in shady places; it flowers in summer, and the seed is ripe in autumn. Some cultivate it in gardens for the sake of the variety of the flowers. They are only propagated by parting the roots, for they do not produce seeds in *England*; the best season for removing them is about *Michaelmas*, when the roots may be separated and planted on the borders of the flower garden. This plant is astringent, deterfive, and vulnerary, and the decoction of it has been made use of against inflammations of the mouth and throat; but it must be only exhibited in the beginning of the disorder.

XYRIS, five *IRIS FÆTIDA*, *stinking Gladden*, or *Flag*, has a round root, pretty much like an onion while it is young, but afterwards it grows crooked, knotted, and is furnished with pretty thick fibres; it sends forth many roots a foot and a half or two feet in length, that are more narrow than the common *Iris*, and as sharp as the end of a sword; they are of a blackish shining green, and have a stinking smell like bugs. Among these leaves several strait smooth stalks arise, on the top of each of which there is a flower like that of the *Iris*, but smaller, and composed of six petals or leaves of a dirty purple, inclining to blue. These are succeeded by oblong angular fruit, which open like the male piony, and discover round seeds, as large as small peas, of a red colour, and of an acrid burning taste. It grows in moist places, on the sides of hedges, among bushes, and in shady valleys. It flowers in *July* and *August*, and the seed is ripe in autumn. It is cultivated in the gardens of the curious,

ous, and grows readily every where; however, it does not grow in many places spontaneously in *England*. The root and seed, taken in decoction, are said to be aperient, to purge off water, and to be good in the rheumatism and dropsy. A dose of the dried root, in powder, given in white wine, is a dram. Some account it excellent in the king's evil, and in the moist asthma; but its principal virtue is to purge off water, and to dissolve clammy humours.

APPENDIX,

A P P E N D I X.

CONTAINING

OBSERVATIONS ON HOT-BEDS,

AND

WATERING OF PLANTS.

HAVING frequently recommended the use of Hot-beds, for the raising of particular Plants mentioned in the preceding part of this Volume, it may not be improper here to consider that subject more at large, as well as to give the inexperienced some idea of the proper observations to be made previous to watering of plants. Without a perfect knowledge of these subjects, it will be in vain to attempt to rear any tender plant, or, indeed, to make any tolerable progress even in common gardening.

A hot-bed is the common help made use of by gardeners to forward the growth of a plant, and force vegetation, when the season of itself does not afford a sufficient warmth. By the help of this, if it be skillfully managed, the hottest climate of the world may be so nearly imitated, that the seeds of those plants, which are brought from any country, may be here made to vegetate and flourish in *England*.

In order to have a right understanding of the hot-bed, we must consider what degree of heat is required for the growth of the plant we intend to cultivate; for nature must be imitated as near as possible, and not forced or exceeded, if we hope for success in our undertaking.

Heat and moisture are certainly the rudiments of vegetation; and therefore, whoever would promote the growth of a plant, must contrive how to have them in such due proportion, as that neither one nor the other exceeds those limits, which nature has allotted for the growth of plants. A dry heat, we find from experience, rather scorches and shrinks a plant, than make

it grow; and wet, if it is not quickly exhaled from the root of a plant, chills it, and often injures it past recovery. A moderate sweating heat therefore, is most desirable, such as is raised by the ferment of wet straw or horse litter, which for a time will send forth, from the earth lying upon it, that gentle steam, impregnated with vegetative salts, which we find contributes so much to the growth of plants, besides putting those juices into motion, which are lodged in the root, and circulating them thro' the proper vessels.

The steam, which is supposed to rise from the root into the wood vessels of plants, to furnish them with sap, will indeed of itself keep a plant alive; but then, at the same time, the bark, leaves, and other spongy parts of a plant, which encompass the sap vessels, if they are too dry, will shrink and pinch those vessels so very close, that they then cannot admit the sap to circulate through them in such quantity, as is necessary to support the plant in vigour: on the contrary, when the spongy parts of plants are kept moist by the ascending-vapours, which continually rise round about them from the earth, then the sap vessels are also more open, and at liberty to receive the nourishment rising from the roots.

To explain this, let us consider those plants, which are cultivated in pots, and set singly in chambers, and other places of the house, for ornament in summer, though we allow them large pots, fresh earth, and water enough, as well as air, as much as they have in a greenhouse, yet they sensibly decline in a few days. This happens principally for want of that steam, which is always abroad, more or less, rising from the earth in the day, and condensing and falling upon them at night. Nor can the pots, set singly in a chamber, have this help, as those have, which are set together for shelter during the winter in a greenhouse; for the number of pots, in a collection of plants, afford steam enough to nourish one another, which one single pot cannot.

The like is to be observed in a dry season, when we are forced to water plants that stand abroad; they are by that help but just kept alive, because the earth round about

about them is so dry, that it hardly emits any steam, or at least not enough to support them. However, no sooner does the rain fall, than we find a contrary effect, as the vapours then rise from the earth everywhere about the plants, and make them flourish. Hence a hot-bed appears to be of use so long only as it can send out such vapours from the earth lying upon it, as are necessary for the support of the plants. When it wants the heat, which is required for that purpose, it must be renewed; otherwise the moisture, which must be maintained to nourish the roots of the plants growing in it, will chill and destroy them. We must not here be supposed to mean the steam, which arises from the dung itself, for that is known to be destructive to all plants; we mean the vapour only, which the heat of the dung evaporates from the earth lying upon it, and which will help the plants; but even this must be tempered and well qualified, lest it should scorch them. It may be moderated according to your desire, by laying on your earth of a thickness proportionable to the heat of the dung below it.

Having now considered the qualities required in a hot-bed, let us proceed to give proper directions for making it. Throw up a load of fresh horse dung in a heap, mixing it well together, and then let it remain for a week or ten days, by which time it will ferment, and come to a proper heat. The bed then must be marked out, answerable to the size of your frames, the length of it running from east to west, so that it may face the sun. Some gardeners dig a trench a spit deep to make the beds in, and others save that trouble, and make it all above ground. The ingenious Mr. *Bradley* tried both ways, and found so little difference, that he could not say which was best. However, if the ground be wet and springy, it is best to make the bed quite above ground, otherwise the dung may be chilled. In the spreading of the dung, care must be taken to lay it equal in every part, that, when the bed comes to settle, it may not lie uneven; and, besides, that it may heat altogether.

Your bed being thus prepared, set on your frames, and put the earth you design for it upon the dung, lay-

ing it ridge-wise, that it may be more conveniently turned over, as you see occasion, if the bed should burn. When you find the extreme heat begin to abate, level the earth upon it, in order to sow your intended seed, always observing to have upon your bed the depth of six or eight inches of earth, to prevent the extreme heat of the dung from spoiling your crop; for, should the roots of whatever you sow or plant touch the dung, they will certainly be spoiled. To these directions should be added a careful observation of those, who make hot-beds; for theory and practice cannot be divided, and the one is indisputably necessary to gain a complete knowledge of the other.

As to the earth, proper to cover the dung of hot-beds, it should always be light, fresh, and well sifted; for you ought to consider how tender the roots of those plants will be, which you there intend to produce. The best composition for this purpose is sandy loam, mixed with an equal part of well-rotted horse-dung: let these lie in a heap together, and be screened or sifted when wanted.

From these considerations on hot-beds, let us turn our attention to consider, what kind of water is the most proper to encrease the health and vigour of plants. It has been found, from repeated experiments, that the clearest water is not to be preferred, nor such as comes immediately from a cold spring; neither should it be harsh, but rather soft and muddy. A stagnating water, that is well exposed to the sun, seems to be the best for the health of any plant. Pure rain-water, if it can be had without any mixture, is the best of all; for enriched or fattened water, becoming such from dungs or other forcing ingredient, proves always fatal to plants, if not rightly understood: at best, it can only contribute to make a plant grow something the quicker, and such forcing of nature always proves of ill consequence, as well to plants as animals, by shortening their lives.

Indeed, when annual plants are the objects of consideration, it may sometimes be of service to use these provocations, the better to bring them to perfection within the compass of our summer; but then they must

must be applied considerately, and a right kind of mixture prepared for each respective sort of plant; for we must not imagine, that one sort of mixture, however fattening it may be, will alike contribute to the welfare of every sort of plant. Mr. *Bradley* found by experience, that the black water, taken from a dunghill, will make a cabbage, or any of that race, prosper extremely; but having used the same water to other plants that were aromatic, and whose texture of parts was more close, such as myrtles, thyme, and the like, it soon killed them. This shews, that gardeners ought not to confide in the richness of any one particular kind of water for the welfare of every sort of plant, any more than a skilful physician will prescribe always the same medicine for the relief of every kind of complaint.

There is another thing to be considered in preparing water for plants, which as yet seems to be very little regarded; that is, when we mix pigeon's dung, or rather such like ingredients in water, we must allow them due time to ferment before we use them, otherwise they will injure the roots watered with them, and that will distemper the plants, which in the end may kill them, as we find from experience is frequently the case.

Mr. *Evelyn* very justly observes, speaking of these mixtures, that they should not be used till they are sufficiently sweetened and purged from their predominant acrimony. That gentleman saw many plants destroyed by the use of unripe mixtures, though the same preparations, when fully matured, performed wonders in forwarding the growth of the same kind of plants. The proportions of every ingredient ought to be reasonably considered, and the quantities not encreased too hastily, merely because a moderate quantity has already begun to shew its good effects. However, a few observations, to an ingenious person, who loves a garden, will soon make him a proper judge of these matters.

Let us now return to plain water, which is undoubtedly the most natural to plants. Of this, use only such, if possible, that has stood in the sun some days

to soften, either in cisterns, or pits dug in the ground, which last is preferred by Mr. *Bradley*; but even this should not be used inconsiderately; we should consider the most proper season for using it, and the best method of refreshing plants with it.

In the first place, we ought to water all plants in the morning, in such seasons when the nights are frosty, and in the evening in the warm seasons. The reason of the first is, that too much wet, lying about the roots of plants, chills and pinches them so much, if it happens to freeze, that they often perish; but, if it be given in the morning, when there is likelihood of a warm day, it gives the plant such nourishment as it requires from it, and is dried up before the frost of the evening can have power over it. Morning waterings should therefore be in *August*, *September*, and *October*, *March*, *April*, and the greatest part of *May*. From that time, to the middle of *August*, chuse the evenings for that work; because then the extreme heat of the sun would over-heat the water given in the morning to the plants, and scald their roots, besides drying it up too quick, before the plants could receive due nourishment from it. Observe never to use evening waterings after the sun is down, without great necessity.

In either of these waterings, care should be taken to do it as near the ground as possible, and not to hold the watering-pot too high; for that would wash the earth from about the roots of the plants, and contribute to make the ground hard, when the sun comes to shine upon it, and so bind the roots too much. Before you water, observe always, that the earth be open, and loose about the roots, and, above all, avoid, as much as can be, wetting the leaves; for, if the frost comes upon them before they are dry, it will pinch and rot them; and, if the sun shines hot upon them while they are wet, it will spot and change their colour.

Besides these simple waterings, *collyflowers*, *cucumbers*, and those plants which have large vessels, should be floated; that is, the alleys between the rows should be dammed up at each end, and filled with water. One of these floatings will do more service than six waterings close to the stems; for they feed and nourish

fish the extreme fibres, which alone want this help, and put the earth in such a condition, that the smallest warmth of the sun will evaporate that steam from it, which is so necessary to plump the principal parts of the leaves and stalks.

It is a rule to be observed in the watering of plants, that, while they are not growing, they should be kept as dry as possible; but, at the time of their growth, they should never want water, giving them frequently a little at a time, and chiefly when they are in blossom: for if, by accident of weather, the water lies long about the roots of plants, it chills them, and checks their growth. It is also to be observed, that such plants as are very succulent or juicy, such as house-leek, &c. must have little water, as they contain moisture enough in themselves for their nourishment, and feed chiefly upon the air, which they imbibe and condense in their spongy parts, as having fewer sap-vessels than any other kind of plants. Mr. Bradley, in his *History of Succulent Plants*, lays it down as a rule, that the more succulent any plant is, the less water it requires; while those, that have the greatest proportion of sap vessels, and the least spongy parts, require frequent waterings, which we find to be true from common experience in the garden, and by examining the structure of water plants, such as willows, &c. which are for the most part composed of sap vessels, and are therefore so tough, that they may be wrought into any figure without breaking; but all juicy plants are brittle for want of these vessels.

In short, if we were to examine with the microscope the numbers and sizes of the sap vessels, in every sort of plant we intend to propagate, we might come to a certainty of the proportion of moisture every plant required.

We cannot conclude this Work without paying that just tribute, which is due to the wise *Author of Nature*, who has not only provided man with every thing that is necessary either for his use or amusement, but has furnished him with reason to enquire into their various properties. The beasts of the field either assist him in

the ease of this labour, or supply him with the most nourishing food; the inhabitants of the air above him, and those of the waters beneath, furnish his table with the most delicate repasts; the earth affords him the most wholesome vegetables, which preserve the temperature of his body, and relieve those disorders, which arise from too free a use of grosser food; beneath his feet, and deep in the bowels of the earth, inexhaustible treasures lie hid, such as gold, silver, and the most precious jewels; iron, to secure him in his habitation from assassination and plunder, and to make him every kind of instrument indispensibly necessary in agriculture, navigation, and mechanical arts. Vain indeed is the attempt to enumerate, in a few lines, those wonders of the creation, of which these six Volumes are but an epitome! Let us, however, from what we have read, draw this conclusion, that, in proportion as we encrease our knowledge of natural causes, the more elevated idea shall we have of him, who is the author of them all.

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